ANNOUNCING

Volume 1 • 1988

Journal of the
American Mathematical Society

Editors
Michael Artin
H. Blaine Lawson, Jr.
Richard Melrose
Wilfried Schmid
Robert E. Tarjan

The new Journal of the American Mathematical Society will be published quarterly beginning in January 1988. It will contain research articles of the highest quality in all areas of pure and applied mathematics. Selected articles scheduled to appear in Volume 1 include: Homology of the zero set of a unipotent vector field on a flag manifold by C. De Concici, G. Lusztig, and C. Procesi; Reduced Hausdorff dimension and the concentration-cancellation law for 2-dimensional incompressible flows by Ronald J. DiPerna and Andrew Majda; Extremals for the Sobolev inequality on the Heisenberg group and the CR Yamabe problem by David Jerison and John M. Lee; p-adic Hodge theory by G. Faltings; Flip theorem and the existence of minimal models for 3-folds by Shigefumi Mori; Zero-one laws for sparse random matrices by Saharon Shelah and Joel Spencer; and Arithmeticity of holonomy groups of Lie foliations by Robert J. Zimmer.

ISSN 0894-0347
Quarterly, Volume 1, 1988

1988 subscription price:
List $100*
Institutional Member $80*
Individual Member $60*
Order code: 88JAMS/NA

* Add for postage: Surface delivery to destinations outside the U.S. and India — $8; to India — $18; Expedited delivery to destinations in North America — $12; elsewhere — $15.

Note: Subscriptions to AMS journals are sold only on a calendar year basis (January–December). Split year and multiple years subscription orders are not accepted. Subscription cancellations from nonmembers will not be accepted after March 1 of the subscription year. Cancellation refunds are computed by deducting an $8 cancellation fee, and the price of each issue already shipped, from the price paid.

TO ORDER: Prepayment required in U.S. funds.
Mail to: American Mathematical Society, Annex Station, P.O. Box 1571, Providence, Rhode Island, 02901-9930 USA or call 800-556-7774 in the continental U.S. to use VISA or MasterCard.
Volume 34, Number 8, December 1987

Special Issue
Assistantships and Fellowships in the Mathematical Sciences 1988–1989

1218 Committee on Employment and Educational Policy, Statement on Employment Prospects
1219 Assistantships and Fellowships in the Mathematical Sciences in 1988–1989
1305 Critical, Historical, or Expository Theses
1307 Postdoctoral Positions Research or Research/Teaching 1988–1989
1309 Foreign Language Requirement for Ph.D.
1313 Stipends for Study and Travel
    Graduate Support. 1313
    Postdoctoral Support. 1316
    Travel and Study Abroad. 1324
    Study in the U.S. for Foreign Nationals. 1328
1332 AMS Membership Information
1335 Advertisements
1347 Annual Index, Volume 34

Subscribers’ changes of address should be reported well in advance to avoid disruption of service: address labels are prepared four to six weeks in advance of the date of mailing. Requests for a change of address should always include the member or subscriber code and preferably a copy of the entire mailing label. Members are reminded that U. S. Postal Service change-of-address forms are not adequate for this purpose, since they make no provision for several important items of information which are essential for the AMS records. Suitable forms are published at the back of every issue of Notices of the American Mathematical Society. Send change of address forms to the Society at Post Office Box 6248, Providence, RI 02940.

[Notices of the American Mathematical Society is published eight times a year (January, February, April, June, August, October, November, December) by the American Mathematical Society at 201 Charles Street, Providence, RI 02904. Second class postage paid at Providence, RI and additional mailing offices. POST­MASTER: Send address change notices to Notices of the American Mathematical Society, Membership and Sales Department, American Mathematical Society, P. O. Box 6248, Providence, RI 02940.] Publication here of the Society’s street address, and the other information in brackets above, is a technical requirement of the U. S. Postal Service. All correspondence should be mailed to the Post Office Box, NOT the street address.

Members are strongly urged to notify the Society themselves of address changes, since reliance on the postal service change-of-address forms is liable to cause delays in processing such requests in the AMS office.
Statement by AMS-MAA Committee on Employment and Educational Policy

Current and prospective graduate students in mathematics and their advisors should be informed of employment prospects in the profession.


AMS-MAA Committee on Employment and Educational Policy
(December 1987)

Morton Brown
Stefan A. Burr
Edward A. Connors, chair

Philip C. Curtis, Jr.
David J. Lutzer
Donald C. Rung
Audrey A. Terras

Data Subcommittee
Lida K. Barrett
Edward A. Connors, chair
Lincoln K. Durst
James F. Hurley
Charlotte Lin
James W. Maxwell
Donald E. McClure
Donald C. Rung

Short Course Subcommittee
Stefan A. Burr, chair
Robert P. Kurshan
Barbara L. Osofsky
Marjorie L. Stein

Lisl Novak Gaal

Employment Concerns Subcommittee
Morton Brown
Audrey A. Terras

Robert J. Thompson
Barnet M. Weinstock, chair

The information about assistantships and fellowships on the following pages was supplied by 371 departments of mathematics, applied mathematics, statistics, computer science, and related mathematical disciplines representing 273 colleges and universities. Institutions in the United States are listed alphabetically by state, followed by Canadian institutions.

In the section on “number anticipated,” the first number refers to the total number of assistantships and fellowships in the program. The second number following the colon is the number available to NEW students (first year or above). A dash is used to indicate “information not supplied by the department.”

The number following “Faculty” is the number of faculty members in the department who are full time employees in the institution and at least half-time in the department; the number following “Published” is the number of those reported who have published a technical paper or book in the last three years.

The section on “Graduate Students” refers to the number of graduate students in the department who are full-time (including teaching assistants), full-time first year, and part-time. Information not supplied in any of these categories is indicated by a dash.

Under the DEGREES AWARDED column the following terms have been used:

Bachelor’s by inst. . . . . . . Number of bachelor’s degrees awarded by the institution
Bachelor’s by dept. . . . . . . Number of bachelor’s degrees awarded by the department
Master’s by dept. . . . . . . Number of master’s degrees awarded by the department
Ph.D. (84/87) . . . . . . . . . . Doctoral degrees awarded during the last three years

Abbreviations used

ANT . . . Algebra or Number Theory
AFA . . . Analysis or Functional Analysis
CT . . . . . Geometry or Topology
L . . . . . . Logic
P . . . . . . Probability
S . . . . . . Statistics
CS . . . . . Computer Science
OR . . . . . Operations Research
AM . . . . . Applied Mathematics
ME . . . . . Mathematics Education

Under the SERVICE REQUIRED column, hours per week section, “c” denotes contact hours.

1218
Mathematical Sciences Assistantships and Fellowships

for Graduate Study at Universities in 1988–1989 for new students, first year or above

<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND paid to student (dollars)</th>
<th>FEES paid by student ($)</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Total no.: no. anticipated)</td>
<td></td>
<td></td>
<td></td>
<td>Academic year 1986–1987</td>
</tr>
</tbody>
</table>

Alabama

Auburn University, Auburn University 36849

ALGEBRA, COMBINATORICS AND ANALYSIS
James R. Wall, Head
Applications due: 4/15/88
Faculty 31; Published 25
Graduate Students: full-time 23; full-time first year 8; part-time 2
Teaching Fellowship (35:15) 7371–14742* 9 1323* 5–10 Teaching
Ph. D. (84/87) ANT 3, AFA 1. Total: 4

FOUNDATION, ANALYSIS AND TOPOLOGY
George Kozlowski, Head
Applications due: 4/15/88
Faculty 28; Published 23
Graduate Students: full-time 34; full-time first year 13; part-time 9
Fellowship (1:1) 6000* 9 1323* 5–10 Teaching
Teaching Assistantship (35:15) 7371–14742* 9–12 1323* 5–10 Teaching

University of Alabama at Birmingham 35294

MATHEMATICS
Lex Oversteegen, Chairman
Applications due: Open
Faculty 23; Published 10
Graduate Students: full-time 13; full-time first year 7; part-time 5
Fellowship (1:1) 6000 9 15 Research
Teaching Assistantship (9:3) 6000 9 4 Teaching

University of Alabama in Huntsville 35899

MATHEMATICS AND STATISTICS
Peter M. Gibson, Chairman
Applications due: 3/1/88
Faculty 20; Published 16
Graduate Students: full-time 12; full-time first year 2; part-time 34
Teaching Assistantship (7:4) 6000–11000 9 Waived 20 Teaching, assisting
Research Assistantship (4:2) 6000–11000 9 Waived 20 Research

University of Alabama, Tuscaloosa 35487

MANAGEMENT SCIENCE AND STATISTICS
F. Hutton Barron, Head
Applications due: Open
Faculty 15; Published –
Graduate Students: full-time 44; full-time first year 8; part-time 1
Teaching Assistantship (12:6) 5500–6000 9 Waived 6 Teaching
Research Assistantship (2:–) 5500–6800 2 Waived 20 Research
Ph. D. (84/87) S 2, Other 2. Total: 4

MATHEMATICS
Alan Hopenwasser, Chairman
Applications due: Open
Faculty 30; Published 23
Graduate Students: full-time 18; full-time first year 5; part-time 1
Teaching Assistantship (24.5:–) 7373–8372* 9 200 20 Teaching
Ph. D. (84/87) AFA 2, Other 1. Total: 3
*Includes tuition grant of $786 per semester plus out-of-state fee grant.

University of South Alabama, Mobile 36688

MATHEMATICS AND STATISTICS (Ad on p. 1220)
Suzanne McGill, Chair
Applications due: 4/1/88
Faculty 24; Published 12
Graduate Students: full-time 3; full-time first year 2; part-time 1
Teaching Assistantship (4:20) 5333 9 141 12–15 Grading, tutoring

1219
<table>
<thead>
<tr>
<th>UNIVERSITY OF SOUTH ALABAMA</th>
</tr>
</thead>
</table>
| The Department of Mathematics and Statistics offers a program leading to the M.S. degree in mathematics. The program combines a basic graduate education in mathematics with options for study in computer science, operations research, statistics, and the more traditional areas of mathematics. Financial assistance is available through graduate assistantships. The current stipend is $5,333 for three quarters plus a waiver of tuition and fees. Duties consist of grading and tutoring in the Department's tutor lab for a combined total of 12-15 hours per week. The Department consists of 24 full-time faculty members. The University, located in the historic city of Mobile, has an enrollment of 10,200. Mobile Bay and the nearby Gulf of Mexico provide an attractive setting for many recreational activities. For further information, please write to: Dr. Richard Hitt, Graduate Coordinator Department of Mathematics and Statistics University of South Alabama Mobile, AL 36688

The University of South Alabama provides equal educational opportunities to and is open and accessible to all qualified students without regard to race, color, creed, national origin, sex or qualified handicapped, with respect to all of its programs and activities.
ARIZONA STATE UNIVERSITY
Department of Mathematics

The Department has initiated an ambitious development program during
which the size and scope of our research and graduate education programs will
increase rapidly. This development is consistent with the policy of the
Arizona Board of Regents which calls for Arizona State University to become
competitive with the nation's leading public universities.

The Department offers graduate programs at the Masters and Ph.D. levels
in targeted areas of modern applied mathematics including: Computational
Mathematics, Differential Equations, Systems and Control, Discrete
Mathematics, Dynamical Systems and Operator Theory. These programs are
reinforced by cooperative efforts with the College of Engineering and other
academic units on campus. In addition, the Department offers graduate
programs in traditional areas of pure mathematics including: Number Theory,
Topology, Algebra, and Analysis.

Financial aid is available to graduate students in the form of teaching
assistantships, research assistantships, and fellowships. Summer support is
available, and outstanding students will be supported by research grants and
contracts.

Arizona State University has over 42,000 students and is located in the
rapidly growing Phoenix metropolitan area - a center of business, finance and
high technology. The valley offers a wide range of educational, cultural and
recreational opportunities. Pleasant and convenient housing is widely
available near the university campus.

For further information write:

Dr. Ed Ihrig, Director of Graduate Studies
Department of Mathematics
Arizona State University
Tempe, AZ 85287-1804

The department offers programs of study leading to the
M.S. and M.A.T. degrees. The M.S. degree may be pursued
under a thesis or non-thesis option in either of the areas
of mathematics or applied statistics. Faculty research
interests include algebra, analysis, combinatorics, geometry,
number theory, probability, approximation theory, differential
equations, statistics, and mathematics education. Small
classes permit close interaction with faculty.

The university, with approximately 13,000 students,
is located in Flagstaff, surrounded by pine forests high in
the mountains of northern Arizona. The department
consists of 32 full-time faculty.

The department is actively seeking qualified
candidates for graduate study and assistantships. Assistant-
ship duties involve teaching, tutoring, and/or grading for
lower division mathematics courses under the supervision
of an assigned faculty member. For more information, write:

Peter Hom
Department of Mathematics
Northern Arizona University
NAU Box 5717
Flagstaff, AZ 86011

NAU is an Equal Opportunity/Affirmative Action Institution. Women and minorities are encouraged to apply.
Arkansas

Arkansas State University, State University 72487

COMPUTER SCIENCE, MATHEMATICS AND PHYSICS

J. L. Linnstaedter, Chairman

Applications due: 4/1/88

Faculty 29; Published 10

Bachelor's by inst. 800

Bachelor's by dept. 36

Master's by dept. 11

Ph. D. (84/87) ANT 1, AFA 1

Teaching Assistantship (13:7) 5350

12 * Teaching

$482.50 per semester for 9 hours.

University of Arkansas, Fayetteville 72701

MATHEMATICAL SCIENCES

B. L. Madison, Chair

Applications due: 3/1/88

Faculty 26; Published

Bachelor's by inst. 1580

Bachelor's by dept. 14

Master's by dept. 6

Ph. D. (84/87) ANT 1, AFA 1

Teaching Assistantship (36:10) 6000-6400

9 6* Teaching

THE UNIVERSITY OF ARIZONA

TUCSON, ARIZONA

PROGRAM OF STUDY

The department offers programs leading to the M.Ed., M.A., M.S., and Ph.D. degrees. Our Ph.D. program is designed to provide students with the basic tools needed to initiate a research proposal leading to a thesis. We expect that those students entering our Ph.D. program will enroll in the year long courses dealing with algebra, analysis, geometry/topology. Following this basic training a research topic is chosen and a program of research is developed in consultation with one or more members of the faculty.

The faculty, approximately 53, carry on a very active research program in the areas of algebra, algebraic geometry, analysis, combinatorics, computational number theory, differential equations, differential geometry, dynamical systems, mathematical physics, number theory, numerical analysis, probability and statistics, and many topics in applied mathematics. There is a separate committee on applied mathematics and an excellent inter-disciplinary program has been developed. A close relationship exists between the mathematics department and the committee on applied mathematics. Prospective graduate students are encouraged to write to us and we will send them a summary of the research activities of the faculty.

Both the department and the committee on applied mathematics have very active colloquium and seminar schedules. In addition, "workshops" are scheduled on current research topics in both pure and applied mathematics.

FINANCIAL AID

The department plans to have approximately 80 teaching assistants for the academic year 1988-89. The teaching assistantship carries a stipend beginning at $8000 (1987-88) for 9 months plus full remission of out-of-state fees. The teaching load is 4 contact hours per week. Approximately 2-3 weeks before classes begin a program for new teaching assistants is offered by the department. This program is designed to prepare new graduate students to be effective teachers.

Approximately 2-3 graduate fellowships may be available for first year graduate students. These carry a stipend of about $10,000.

FEES

Out-of-state fees are waived for teaching assistants, but a registration fee of $598 (1987-88) is required each semester.

TUCSON

The Tucson metropolitan area has a population of 550,000. It is located in a valley surrounded by mountain ranges, some of which tower 7,000 feet above the city. The Mexican border is 45 miles south of the University. The winter climate is dry and mild; air conditioning makes the buildings pleasant in the summer. The surroundings lend themselves to various outdoor recreational activities. Classical concerts, theater, skiing, and mountain hiking are all readily available.

APPLYING

Application forms for admission and financial assistance may be obtained from the department at the address given below. Credentials for admission are processed by the Graduate Committee of the department as they are received, and the student is notified as soon as possible. The Graduate Committee requests that the GRE scores also be submitted to the department. Applications for assistantships should be completed prior to March 5, notification of awards is made by April 15.

CORRESPONDENCE AND INFORMATION

Write to: Graduate Committee — Department of Mathematics

University of Arizona — Tucson, AZ 85721

Equal Opportunity Employer/Affirmative Action
University of Arkansas at Little Rock 72204

**MATHEMATICS AND STATISTICS**

Daniel McCallum, Acting Chairman

<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>paid to student</td>
<td>paid by student ($)</td>
<td>hours</td>
<td>type</td>
</tr>
<tr>
<td></td>
<td>dollars</td>
<td>months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (1:2)</td>
<td>5700</td>
<td>9</td>
<td>600</td>
<td></td>
</tr>
<tr>
<td>Research Assistantship (1/8:--)</td>
<td>600</td>
<td>9</td>
<td>600</td>
<td></td>
</tr>
</tbody>
</table>

**California**

California Institute of Technology, Pasadena 91125

**APPLIED MATHEMATICS**

P. G. Saffman, Executive Officer

<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>paid to student</td>
<td>paid by student ($)</td>
<td>hours</td>
<td>type</td>
</tr>
<tr>
<td></td>
<td>dollars</td>
<td>months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (5:5)</td>
<td>8600</td>
<td>12</td>
<td>1-15 Research</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (15:8)</td>
<td>7277-8019</td>
<td>9</td>
<td>12-15 Grading, research</td>
<td></td>
</tr>
</tbody>
</table>

California Polytechnic State University, San Luis Obispo 93407

**MATHEMATICS**

Thomas E. Hale, Chair

<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>paid to student</td>
<td>paid by student ($)</td>
<td>hours</td>
<td>type</td>
</tr>
<tr>
<td></td>
<td>dollars</td>
<td>months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part-time Instructor (10:--)</td>
<td>4159</td>
<td>12</td>
<td>3 3 Teaching</td>
<td></td>
</tr>
</tbody>
</table>

*$290 quarter, nonresident $384 quarter unit.

California State University, Fresno 93740

**MATHEMATICS**

Noel C. Harberton, Chairman

<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>paid to student</td>
<td>paid by student ($)</td>
<td>hours</td>
<td>type</td>
</tr>
<tr>
<td></td>
<td>dollars</td>
<td>months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (12:2)</td>
<td>8213-9019</td>
<td>9</td>
<td>261-393 20 Teaching, grading</td>
<td></td>
</tr>
</tbody>
</table>

California State University, Hayward 94542

**MATHEMATICS AND COMPUTER SCIENCE**

William R. Nico, Chairman

<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>paid to student</td>
<td>paid by student ($)</td>
<td>hours</td>
<td>type</td>
</tr>
<tr>
<td></td>
<td>dollars</td>
<td>months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (10:5)</td>
<td>2100/qtr.</td>
<td>9</td>
<td>241/qtr. 4 Teaching</td>
<td></td>
</tr>
<tr>
<td>Granting Assistantship (10:5)</td>
<td>6.50/hr.</td>
<td>12</td>
<td>241/qtr. 6-9 Grading</td>
<td></td>
</tr>
</tbody>
</table>

California State University, Long Beach 90840

**MATHEMATICS AND COMPUTER SCIENCE**

Charles W. Austin, Chairman

<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>paid to student</td>
<td>paid by student ($)</td>
<td>hours</td>
<td>type</td>
</tr>
<tr>
<td></td>
<td>dollars</td>
<td>months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (12:6)</td>
<td>8533-8892</td>
<td>9</td>
<td>6 6 6 6 Teaching</td>
<td></td>
</tr>
<tr>
<td>Graduate Assistantship (3:2)</td>
<td>6460-6700</td>
<td>9</td>
<td>742* 20 Computer lab.</td>
<td></td>
</tr>
</tbody>
</table>

*California residents; nonresidents pay $371 plus $147 per unit.
CALIFORNIA STATE UNIVERSITY, LOS ANGELES

M.S. IN PURE OR APPLIED MATHEMATICS

The Department of Mathematics and Computer Science offers programs leading to the masters degree in either pure or applied mathematics. Graduate Teaching Assistantships are available to all candidates who are eligible for classification into the graduate program and who maintain acceptable performance. Assistantship support is approximately $7,100 for teaching one course per quarter and up to $15,500 for teaching two courses for 4 quarters. For more information write:

WAYNE BISHOP, Chair
Department of Mathematics and Computer Science
California State University, L.A.
Los Angeles, California 90032

AN AFFIRMATIVE ACTION/EQUAL OPPORTUNITY/HANDICAPPED/TITLE IX EMPLOYER
<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
<th>Academic year 1986-1987</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total no.: no. anticipated</td>
<td>paid to student</td>
<td>paid by student ($)</td>
<td>hours</td>
<td>type</td>
<td></td>
</tr>
<tr>
<td>STIPEND FEES paid to student</td>
<td>paid by student</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STUDIES REQUIRE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>San Jose State University, San Jose 95192</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MATHMATICS AND COMPUTER SCIENCE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Veril L. Phillips, Chairman</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Applications due: 5/1/88</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty 70; Published 45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Students: full-time 75; full-time first year 25; part-time 50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Fellowship (15:18) 5156-10312 9 800* 3-6 Teaching</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Nonresidents and foreign students pay an additional $147 per unit.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| **Stanford University, Stanford 94305** |
| **ENGINEERING-ECONOMIC SYSTEMS** |
| David G. Luenberger, Chairman |
| Applications due: 2/15/88 |
| Faculty 10; Published 10 |
| Graduate Students: full-time 138; full-time first year 67; part-time 9 |
| Fellowship (16:6) 7000-9000* 9 98 Teaching |
| Teaching Assistantship (10:0) 7410-8160* 9 20 Grade, tutor |
| Research Assistantship (18:5) 7350-10350* 9 20 Research |
| **1987-88 figures; 1988-89 figures not yet determined.** |

| **University of California, Berkeley 94720** |
| **BIOSTATISTICS** |
| N. P. Jewell and L. Le Cam, Chairmen |
| Applications due: 1/5/88 |
| Faculty 25; Published 20 |
| Graduate Students: full-time 30; full-time first year 14; part-time 9 |
| Fellowship (3:3) 1466.50-11227 9 1466.50* 20 Teaching |
| Teaching Assistantship (6:6) 8627 9 1466.50* 20 Research |
| Research Assistantship (2:2) 9912 12 1466.50* 20 \( R \) |
| Readership (4:4) 5270 9 1466.50* 20 Grading |
| *California resident; $5927 nonresident or foreign. |

| **University of California, Berkeley 94720** |
| **MATHEMATICS** |
| J. W. Addison, Jr., Chair |
| Applications due: |
| Faculty 67; Published 67 |
| Graduate Students: full-time 252; full-time first year 58; part-time 9 |
| Fellowship (32:16) 4800-12300 10 1466.50* 20 Teaching |
| Teaching Assistantship (100:20) 10633-12650 10 ** 4 Teaching |
| Research Assistantship (25:0) 9073-9568 10 ** 20 Research |
| *Fellowships: 1/5/88; assistantships: 2/1/88 |
| **California resident: $1478; nonresident: $2191-$3261.** |

| **Science/MATHEMATICS EDUCATION** |
| Frederick Reif, Chair |
| Research Assistantship (10:4) 4500-9000 |
| **Ph.D program only.** |
| **All faculty denote time; all are less than 50%.** |

*Ph.D program only.**
<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>University of California, Davis 95616</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MATHEMATICS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marc Mangel, Chair</td>
<td>Applications due: *</td>
<td>Bachelor’s by inst. 3049</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (4:-)</td>
<td>6516**</td>
<td>9</td>
<td>Graduate Students: full-time 68; full-time first year 23; part-time 0</td>
<td></td>
</tr>
<tr>
<td>Teaching Fellowship (9:-)</td>
<td>5031**</td>
<td>9</td>
<td>Ph. D. (84/87) Total: 10</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (31:2)</td>
<td>10062**</td>
<td>9</td>
<td>Teaching, grading</td>
<td></td>
</tr>
<tr>
<td>Associate-In (5:5)</td>
<td>9</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship: 1/15/88; assistantships: 2/15/88.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fellowships:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowships: California Tuition:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* 1. <strong>BIOMATHEMATICS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>George Roussas, Associate Dean</td>
<td>Applications due: *</td>
<td>Bachelor’s by dept. 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship**</td>
<td>5300</td>
<td>9</td>
<td>Graduate Students: full-time 22; full-time first year 7; part-time 2</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (14:14)</td>
<td>5001-10062</td>
<td>9</td>
<td>Ph. D. (84/87) S 3. Total: 3</td>
<td></td>
</tr>
<tr>
<td>Research Assistantship (1:1)</td>
<td>5202-10404</td>
<td>12</td>
<td>Teaching, grading</td>
<td></td>
</tr>
<tr>
<td>Associate In (1:1)</td>
<td>5030-12780</td>
<td>9</td>
<td>Research</td>
<td></td>
</tr>
<tr>
<td>Teaching, grading, office hours, preparation.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>University of California, Irvine 92717</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MATHEMATICS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>James J. Yeh, Chairman</td>
<td>Applications due: 1/1/88</td>
<td>Bachelor’s by dept. 62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (9:-)</td>
<td>2650-10000</td>
<td>9-12</td>
<td>Graduate Students: full-time 45; full-time first year 14; part-time 5</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (29:29)</td>
<td>10062</td>
<td>9</td>
<td>Teaching, research</td>
<td></td>
</tr>
<tr>
<td>Research Assistantship (2:-)</td>
<td>4500-9500</td>
<td>9</td>
<td>Ph. D. (84/87) P 1, S 1, AM 1.</td>
<td></td>
</tr>
<tr>
<td>*Tuition: $4280, fees: $1429.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>University of California, Los Angeles 90024</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>BIOMATHEMATICS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kenneth Lange, Chair</td>
<td>Applications due: 1/15/88</td>
<td>Bachelor’s by dept. 4906</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (2:-3:-2)</td>
<td>4000-5000</td>
<td>9</td>
<td>Graduate Students: full-time 11; full-time first year 3; part-time 0</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (2:1)</td>
<td>5800</td>
<td>9</td>
<td>5706*</td>
<td></td>
</tr>
<tr>
<td>NIH Training Grant (6.2:-4)</td>
<td>6500</td>
<td>12</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Nonresident Tuition Waiver (3:1-2)</td>
<td>5000</td>
<td>9</td>
<td>Grading, teaching</td>
<td></td>
</tr>
<tr>
<td>Competitive Awards (1-3:-1-3)</td>
<td>5000-10000</td>
<td>9</td>
<td>Ph. D. (84/87) Other 2. Total: 2</td>
<td></td>
</tr>
<tr>
<td>*Tuition: $4280, fees: $1429.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MATHEMATICS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T. W. Gamelin, Chairman</td>
<td>Applications due: 2/15/88</td>
<td>Bachelor’s by dept. 4906</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (2:-3:-2)</td>
<td>8000-10000</td>
<td>9</td>
<td>Graduate Students: full-time 131; full-time first year 54; part-time 6</td>
<td></td>
</tr>
<tr>
<td>Teaching Fellowship (2:-3:-2)</td>
<td>10633-12469</td>
<td>9</td>
<td>Ph. D. (84/87) ANT 5, AFA 8,</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (15:20-25)</td>
<td>10633-12469</td>
<td>9</td>
<td>AM 9, Other 1. Total: 42</td>
<td></td>
</tr>
<tr>
<td>Research Assistantship (35:40-15:20)</td>
<td>8500-12469</td>
<td>9-12</td>
<td>Teaching, research</td>
<td></td>
</tr>
<tr>
<td>Graduate Opportunity Fellowship (1-2:-1-2)</td>
<td>8000</td>
<td>Waived</td>
<td>1418-5706*</td>
<td></td>
</tr>
<tr>
<td>*California resident $1418; nonresident $5706. Nonresidents with teaching assistantships or research assistantships usually receive nonresident tuition fellowships covering all or part of these fees.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SCHOOL OF PUBLIC HEALTH, BIOSTATISTICS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W. G. Cumberland, Chairman</td>
<td>Applications due: 7/1/88</td>
<td>Bachelor’s by dept. 4906</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (Varies:-)</td>
<td>8-10</td>
<td>Readers</td>
<td>Bachelor’s by dept. 0</td>
<td></td>
</tr>
<tr>
<td>TYPE OF ASSISTANCE</td>
<td>STIPEND</td>
<td>FEES</td>
<td>SERVICE REQUIRED</td>
<td>DEGREES AWARDED</td>
</tr>
<tr>
<td>--------------------</td>
<td>---------</td>
<td>------</td>
<td>------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Academic year</td>
</tr>
<tr>
<td>(Total no.: no. anticipated)</td>
<td>paid to student dollars</td>
<td>paid by student ($)</td>
<td>hours</td>
<td>type</td>
</tr>
<tr>
<td>UNIVERSITY OF CALIFORNIA, LOS ANGELES</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROGRAMS.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Department offers the degrees Master of Arts (M.A.), Master of Arts in Teaching (M.A.T.) and Doctor of Philosophy (Ph.D.) in Mathematics. Students have the option of working within an interdisciplinary program, either in applied mathematics or statistics.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FINANCIAL SUPPORT.</td>
<td>Currently 70% of all full-time graduate students receive full financial support and another 20% receive partial support, through a mixture of fellowships, research assistantships and teaching assistantships. Normally admission to the Ph.D. program is accompanied by an offer of financial support, guaranteed for four years if the student is making satisfactory progress towards the doctorate. Full-time teaching assistants teach four hours of class and hold three office hours each week and they help proctor and grade examinations.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APPLIED AND COMPUTATIONAL MATHEMATICS AT UCLA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UCLA has been awarded a grant under the University Research Initiative to expand its research and teaching program in Applied and Computational Mathematics. As a result there are vacancies for suitably qualified applicants wishing to join the program as graduate student research assistants. These assistantships carry a salary of at least $9000 per academic year plus a non-resident tuition fellowship for non-residents and a registration fee fellowship.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Areas of special interest include computational fluid dynamics, scientific computation, nonlinear waves, perturbation methods, magnetohydrodynamics, bifurcation methods and exploration seismology.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>For further information on our programs write to Professor C. G. Lange, Graduate Vice-Chairman, Department of Mathematics, University of California, Los Angeles, CA 90024-1555.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
University of Southern California, Los Angeles 90089

MATHEMATICS
Ronald E. Bruck, Chairman

Applications due: 2/1/88
Faculty 32; Published 31

Graduate Students: full-time 90; full-time first year 35; part-time 6

Fellowship (4:*)** 4000 9
Teaching Assistantship (76:-) 7750-8586 9 12 Grading, teaching
Research Assistantship (3:-) 7750-8586 9 12 Research

*Not restricted.
**Dean’s Fellowship supplements other support for all who qualify.

Colorado

Colorado State University, Ft. Collins 80523

MATHEMATICS
Robert E. Gaines, Director

Applications due: 4/15/88
Faculty 31; Published 26

Graduate Students: full-time 60; full-time first year 19; part-time 5

Fellowship (3:-) 1600 9
Teaching Assistantship (41:-) 8300-9300 9 Waived 4 cr.
Research Assistantship (3:-) 8300-9300 9 Waived 15

STATISTICS
Duane C. Boes, Chair

Applications due: 3/15/88
Faculty 15; Published 14

Graduate Students: full-time 27; full-time first year 10; part-time 2

Fellowship (3:1) 1500-4000 9 326 20 Grading, teaching
Teaching Assistantship (10:3) 6300-8100 9 326 20 Service, research
Research Assistantship (5:2) 6300-8110 326 20 Service, research
Service assistantship (4:2) 6300-8110 326 20 Consulting, service

GRADUATE MATHEMATICS AT LA JOLLA, CALIFORNIA

PROGRAMS: (i) M.A. and Ph.D. degrees in pure mathematics offer studies in all major fields of pure mathematics, and in probability, statistics, combinatorics and numerical analysis. A group in geometric topology, differential geometry and partial differential equations formed around Professors Richard Hamilton, Linda Rothschild, and Michael Freedman, is a major force. (ii) The M.A. in applied mathematics and the M.S. in statistics are special one to two year courses of study emphasizing applicable mathematics, the latter concentrating on statistics and related subjects.

FINANCIAL AID: Research Assistantships (approximately $916.50 per month + Tuition and/or Fees). Teaching Assistantships (approximately $1,181.50 per month for 9 months). San Diego Fellowship (for educationally disadvantaged students; approximately $800.00 per month + Fees and/or Tuition for 10 months). Powell Fellowship (approximately $12,000.00 for 9 months). Block Grant Fellowships (typically $700.00 per month + Fees and/or Tuition for 10 months).

Department of Mathematics - UNIVERSITY OF CALIFORNIA, SAN DIEGO

La Jolla, California 92093-0112

1228
**Graduate Mathematics at the University of Southern California**


Graduate study is enhanced by an outstanding faculty, a vigorous schedule of seminars and colloquia, and an extensive program of Distinguished Lecturers and visitors. From Oktoberfest (hosted by our German students), through the daily teas, to the end-of-year pizza party, graduate students participate fully in the Department's social as well as mathematical life.

Almost all graduate students receive financial aid. The most common form is a Teaching Assistantship, which in 1987-88 carries a nine-month salary between $7,750 and $8,586, plus full tuition remission (12 units/semester) and a bonus 12 units of remission for the Summer. Additional support is available for summer teaching. All students who meet specific G.P.A. and GRE criteria receive a $4,000 Dean's Fellowship, in addition to any other form of support. Several Research Assistantships are available to students, and a limited number of Fellowships are available through the Graduate School.

For more information, write to:

Graduate Vice-Chairman
Department of Mathematics
University of Southern California
Los Angeles, CA 90089-1113

---

**Table of Degrees Awarded**

<table>
<thead>
<tr>
<th>University of Colorado, Boulder 80309</th>
<th>Mathematics</th>
</tr>
</thead>
<tbody>
<tr>
<td>William B. Jones, Chair</td>
<td>Faculty 42; Published 35</td>
</tr>
<tr>
<td><strong>Fellowship (24:4)</strong></td>
<td>1000-1500 9</td>
</tr>
<tr>
<td><strong>Teaching Assistantship (36:12)</strong></td>
<td>7224-8719 9</td>
</tr>
<tr>
<td><strong>Research Assistantship (5:1)</strong></td>
<td>7227 9</td>
</tr>
<tr>
<td><strong>NSF (0:1)</strong></td>
<td>7227 9</td>
</tr>
<tr>
<td><strong>Graduate Students:</strong> full-time 87; full-time first year 26; part-time 8</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>University of Colorado, Colorado Springs 80933</th>
<th>Mathematics</th>
</tr>
</thead>
<tbody>
<tr>
<td>K. M. Rangaswamy, Chairman</td>
<td>Applications due: 3/1/88</td>
</tr>
<tr>
<td><strong>Teaching Assistantship (10:3)</strong></td>
<td>5500-7000 9</td>
</tr>
<tr>
<td><strong>Graduate Students:</strong> full-time 6; full-time first year 4; part-time 6</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>University of Colorado, Denver 80202</th>
<th>Mathematics</th>
</tr>
</thead>
<tbody>
<tr>
<td>J. Richard Lundgren, Chairman</td>
<td>Faculty 20; Published 16</td>
</tr>
<tr>
<td><strong>Teaching Assistantship (20:10)</strong></td>
<td>6800-7000 9</td>
</tr>
<tr>
<td><strong>Research Assistantship (12:6)</strong></td>
<td>6800-7000 9</td>
</tr>
<tr>
<td><strong>Graduate Students:</strong> full-time 30; full-time first year 16; part-time 55</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Degrees Awarded</th>
<th>Bachelor's by inst.</th>
<th>Bachelor's by dept.</th>
<th>Master's by dept.</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Colorado, Boulder 80309</td>
<td>3047</td>
<td>95</td>
<td>7</td>
</tr>
<tr>
<td>University of Colorado, Colorado Springs 80933</td>
<td>414</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>University of Colorado, Denver 80202</td>
<td>35</td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>
University of Denver, Denver 80208

MATHMATICS AND COMPUTER SCIENCE

Applications due: 3/1/88

Faculty 12; Published 5

Graduate Students: full-time 20; full-time first year 7; part-time 1

Teaching Assistantship (20:7) 5500 9 20 Grading, lab.

Ph. D. (84/87) CS 2, AM 1.

Total: 3

University of Northern Colorado, Greeley 80639

MATHMATICS AND APPLIED STATISTICS

Applications due: 4/88

Faculty 21; Published 10

Graduate Students: full-time 15; full-time first year 4; part-time 4

Teaching Assistantship (4:4) 5040-5670 9 4087 6 Teaching

Ph. D. (84/87) S 13. Total: 13

University of Connecticut, Storrs 06268

MATHMATICS

Applications due: Open

Faculty 32; Published 30

Graduate Students: full-time 65; full-time first year 26; part-time 3

Teaching Assistantship (32:3) 8100-10090 9 750 12 Teaching, research

Ph. D. (84/87) GT 1, L 1.

Total: 2

STATISTICS

Applications due: 3/1/88

Faculty 10; Published 9

Graduate Students: full-time 24; full-time first year 7; part-time 4

Teaching Assistantship (8:4) 7715-9595 9 Waved 10-20 Teaching, consulting

Ph. D. (84/87) S 4. Total: 4

Connecticut

The University of Colorado at Denver announces a new

Ph.D. Program in Applied Mathematics

CU Denver, located on the Front Range of the Colorado Rockies, is emerging as a leading center for applied mathematics in the West.

Active research areas: supercomputing, algorithms for advanced and parallel architectures, graph theory and combinatorics, applied statistics, operations research, artificial intelligence.

Teaching and research assistantships available.

Write or call: Graduate Program, Mathematics Department, University of Colorado at Denver, 1100 14th St., Campus Box 170, Denver, CO 80202, (303) 556-8442.

CU Denver is an affirmative action/equal opportunity institution.
The University of Connecticut
Department of Mathematics
Graduate Studies in Pure and Applied Mathematics and Actuarial Science

Degree Programs. The Department offers strong programs of study leading to the M.S. and Ph.D. degrees in a wide variety of areas of pure and applied mathematics and an excellent full program in Actuarial Science leading to the M.S. degree. Flexible plans of study are individually tailored to meet each student's needs and interests. Small classes and an active research faculty provide the opportunity for graduate students to work closely with individual faculty members.

Financial Aid. Full financial support is readily available. Teaching assistants for 1988-89 will receive a stipend ranging from $8,100 to $10,090, depending on academic progress. All teaching assistants receive a tuition waiver and health insurance. The usual teaching load for first-year assistants is four-to-six contact hours per week. Highly qualified applicants are eligible for supplemental fellowships of $500 to $1,000. In addition, summer fellowships and lectureships are available and cooperative job opportunities exist with nearby companies.

Location. The University is within easy reach of the major metropolitan areas of New England and New York City, but is located in an unspoiled rural area surrounded by picturesque forests and farmlands. A full range of recreational and cultural activities is available on campus and close by.

For further information and application forms, please write to:

Graduate Chairman
Department of Mathematics, U-9
The University of Connecticut
Storrs, CT 06268
<table>
<thead>
<tr>
<th>Type of Assistance</th>
<th>Stipend</th>
<th>Fees</th>
<th>Service Required</th>
<th>Degrees Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Statistics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I. Richard Savage, Chairman</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (12:8)**</td>
<td>0-8000</td>
<td>9***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Fellowship (12:8)**</td>
<td>910-2730</td>
<td>per term</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Research Assistantship (3:7)**</td>
<td>5850</td>
<td>9***</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Other (1:-)**</td>
<td>5850</td>
<td>9***</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>*There is no undergraduate major in statistics.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>These are 1987-88 figures.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>↑First and second year students are not required to provide any service; third and fourth year students earn half of their stipend through teaching, consulting, or work on a research contract.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>↑↑Teaching fellow I: 75 hours per term, usually grading papers; teaching fellow II: 150 hours per term grading papers and meeting sections; teaching fellow III: 225 hours per term grading papers and meeting sections.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>District of Columbia</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>American University, Washington 20016</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics and Statistics</td>
<td>Applications due: 2/15/88</td>
<td>Bachelor's by inst. 1079</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Austin M. Barron, Chairman</td>
<td>Faculty 14; Published 9</td>
<td>Bachelor's by dept. 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (6:3-4)</td>
<td>5500</td>
<td>9</td>
<td>Waived</td>
<td>15 Teaching</td>
</tr>
<tr>
<td>Teaching Assistantship (2:-)</td>
<td>8875-9675</td>
<td>9</td>
<td>Waived</td>
<td>10 Teaching</td>
</tr>
<tr>
<td>GPOP (3:-)</td>
<td>6900</td>
<td>12</td>
<td>Waived</td>
<td>20 Teaching</td>
</tr>
<tr>
<td>Hurst Fellowship (2:-)</td>
<td>2000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Variable, university wide competition.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Howard University, Washington 20059</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>Applications due: 6/1/88</td>
<td>Bachelor's by inst. 185</td>
<td></td>
<td></td>
</tr>
<tr>
<td>James A. Donaldson, Chairman</td>
<td>Faculty 25; Published 17</td>
<td>Bachelor's by dept. 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (5:5)</td>
<td>8000</td>
<td>9</td>
<td>3765</td>
<td>15 Grading, teaching</td>
</tr>
<tr>
<td><strong>Delaware</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>University of Delaware, Newark 19716</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematical Sciences</td>
<td>Applications due: 3/1/88</td>
<td>Bachelor's by inst. 2640</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ivar Stakgold, Chairman</td>
<td>Faculty 43; Published 32</td>
<td>Bachelor's by dept. 44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (3:-)</td>
<td>8875-9675</td>
<td>9</td>
<td>Research</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (29:7)</td>
<td>8875-9675</td>
<td>9</td>
<td>12-15 Teaching, grading</td>
<td></td>
</tr>
<tr>
<td>Research Assistantship (5:-)</td>
<td>8875-9675</td>
<td>9</td>
<td>Research</td>
<td></td>
</tr>
<tr>
<td><strong>District of Columbia</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>American University, Washington 20016</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics and Statistics</td>
<td>Applications due: 2/15/88</td>
<td>Bachelor's by inst. 1079</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Austin M. Barron, Chairman</td>
<td>Faculty 14; Published 9</td>
<td>Bachelor's by dept. 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (6:3-4)</td>
<td>5500</td>
<td>9</td>
<td>Waived</td>
<td>15 Teaching</td>
</tr>
<tr>
<td>Teaching Assistantship (2:-)</td>
<td>8875-9675</td>
<td>9</td>
<td>Waived</td>
<td>10 Teaching</td>
</tr>
<tr>
<td>GPOP (3:-)</td>
<td>6900</td>
<td>12</td>
<td>Waived</td>
<td>20 Teaching</td>
</tr>
<tr>
<td>Hurst Fellowship (2:-)</td>
<td>2000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Variable, university wide competition.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Howard University, Washington 20059</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>Applications due: 6/1/88</td>
<td>Bachelor's by inst. 185</td>
<td></td>
<td></td>
</tr>
<tr>
<td>James A. Donaldson, Chairman</td>
<td>Faculty 25; Published 17</td>
<td>Bachelor's by dept. 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (5:5)</td>
<td>8000</td>
<td>9</td>
<td>3765</td>
<td>15 Grading, teaching</td>
</tr>
<tr>
<td><strong>Delaware</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>University of Delaware, Newark 19716</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematical Sciences</td>
<td>Applications due: 3/1/88</td>
<td>Bachelor's by inst. 2640</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ivar Stakgold, Chairman</td>
<td>Faculty 43; Published 32</td>
<td>Bachelor's by dept. 44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (3:-)</td>
<td>8875-9675</td>
<td>9</td>
<td>Research</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (29:7)</td>
<td>8875-9675</td>
<td>9</td>
<td>12-15 Teaching, grading</td>
<td></td>
</tr>
<tr>
<td>Research Assistantship (5:-)</td>
<td>8875-9675</td>
<td>9</td>
<td>Research</td>
<td></td>
</tr>
<tr>
<td><strong>District of Columbia</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>American University, Washington 20016</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics and Statistics</td>
<td>Applications due: 2/15/88</td>
<td>Bachelor's by inst. 1079</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Austin M. Barron, Chairman</td>
<td>Faculty 14; Published 9</td>
<td>Bachelor's by dept. 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (6:3-4)</td>
<td>5500</td>
<td>9</td>
<td>Waived</td>
<td>15 Teaching</td>
</tr>
<tr>
<td>Teaching Assistantship (2:-)</td>
<td>8875-9675</td>
<td>9</td>
<td>Waived</td>
<td>10 Teaching</td>
</tr>
<tr>
<td>GPOP (3:-)</td>
<td>6900</td>
<td>12</td>
<td>Waived</td>
<td>20 Teaching</td>
</tr>
<tr>
<td>Hurst Fellowship (2:-)</td>
<td>2000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Variable, university wide competition.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Howard University, Washington 20059</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>Applications due: 6/1/88</td>
<td>Bachelor's by inst. 185</td>
<td></td>
<td></td>
</tr>
<tr>
<td>James A. Donaldson, Chairman</td>
<td>Faculty 25; Published 17</td>
<td>Bachelor's by dept. 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (5:5)</td>
<td>8000</td>
<td>9</td>
<td>3765</td>
<td>15 Grading, teaching</td>
</tr>
<tr>
<td><strong>Delaware</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>University of Delaware, Newark 19716</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematical Sciences</td>
<td>Applications due: 3/1/88</td>
<td>Bachelor's by inst. 2640</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ivar Stakgold, Chairman</td>
<td>Faculty 43; Published 32</td>
<td>Bachelor's by dept. 44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (3:-)</td>
<td>8875-9675</td>
<td>9</td>
<td>Research</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (29:7)</td>
<td>8875-9675</td>
<td>9</td>
<td>12-15 Teaching, grading</td>
<td></td>
</tr>
<tr>
<td>Research Assistantship (5:-)</td>
<td>8875-9675</td>
<td>9</td>
<td>Research</td>
<td></td>
</tr>
<tr>
<td><strong>District of Columbia</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>American University, Washington 20016</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics and Statistics</td>
<td>Applications due: 2/15/88</td>
<td>Bachelor's by inst. 1079</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Austin M. Barron, Chairman</td>
<td>Faculty 14; Published 9</td>
<td>Bachelor's by dept. 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (6:3-4)</td>
<td>5500</td>
<td>9</td>
<td>Waived</td>
<td>15 Teaching</td>
</tr>
<tr>
<td>Teaching Assistantship (2:-)</td>
<td>8875-9675</td>
<td>9</td>
<td>Waived</td>
<td>10 Teaching</td>
</tr>
<tr>
<td>GPOP (3:-)</td>
<td>6900</td>
<td>12</td>
<td>Waived</td>
<td>20 Teaching</td>
</tr>
<tr>
<td>Hurst Fellowship (2:-)</td>
<td>2000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Variable, university wide competition.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Howard University, Washington 20059</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>Applications due: 6/1/88</td>
<td>Bachelor's by inst. 185</td>
<td></td>
<td></td>
</tr>
<tr>
<td>James A. Donaldson, Chairman</td>
<td>Faculty 25; Published 17</td>
<td>Bachelor's by dept. 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (5:5)</td>
<td>8000</td>
<td>9</td>
<td>3765</td>
<td>15 Grading, teaching</td>
</tr>
<tr>
<td><strong>Delaware</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>University of Delaware, Newark 19716</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematical Sciences</td>
<td>Applications due: 3/1/88</td>
<td>Bachelor's by inst. 2640</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ivar Stakgold, Chairman</td>
<td>Faculty 43; Published 32</td>
<td>Bachelor's by dept. 44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (3:-)</td>
<td>8875-9675</td>
<td>9</td>
<td>Research</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (29:7)</td>
<td>8875-9675</td>
<td>9</td>
<td>12-15 Teaching, grading</td>
<td></td>
</tr>
<tr>
<td>Research Assistantship (5:-)</td>
<td>8875-9675</td>
<td>9</td>
<td>Research</td>
<td></td>
</tr>
<tr>
<td><strong>District of Columbia</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>American University, Washington 20016</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics and Statistics</td>
<td>Applications due: 2/15/88</td>
<td>Bachelor's by inst. 1079</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Austin M. Barron, Chairman</td>
<td>Faculty 14; Published 9</td>
<td>Bachelor's by dept. 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (6:3-4)</td>
<td>5500</td>
<td>9</td>
<td>Waived</td>
<td>15 Teaching</td>
</tr>
<tr>
<td>Teaching Assistantship (2:-)</td>
<td>8875-9675</td>
<td>9</td>
<td>Waived</td>
<td>10 Teaching</td>
</tr>
<tr>
<td>GPOP (3:-)</td>
<td>6900</td>
<td>12</td>
<td>Waived</td>
<td>20 Teaching</td>
</tr>
<tr>
<td>Hurst Fellowship (2:-)</td>
<td>2000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Variable, university wide competition.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Howard University, Washington 20059</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>Applications due: 6/1/88</td>
<td>Bachelor's by inst. 185</td>
<td></td>
<td></td>
</tr>
<tr>
<td>James A. Donaldson, Chairman</td>
<td>Faculty 25; Published 17</td>
<td>Bachelor's by dept. 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (5:5)</td>
<td>8000</td>
<td>9</td>
<td>3765</td>
<td>15 Grading, teaching</td>
</tr>
</tbody>
</table>
Florida

Florida Atlantic University, Boca Raton 33431

MATHMATICS
J. Brewer, Chairman

Teaching Assistantship (4:9) 9000 9 500 12-15 Grading, teaching

Florida State University, Tallahassee 32306

MATHMATICS
Ralph D. McWilliams, Chairman

Graduate Students: full-time 9; full-time first year 4; part-time 8

Teaching Fellowship (2:2) 13000 12 ** 13 Teaching
Teaching Assistantship (7:30)** 8400-11600† 9-12 ** 20† Teaching, grading
Research Assistantship (10:5) 7000-12000 9-12 ** 20 Research
Minority (2.2) 6000-10000 12 ** 0-13 Teaching, grading

*Fellowships: 12/15/87, assistantships: 1/15/88. Late applications may be considered.
**Resident: $358, nonresident: $500, under normal availability of waivers.
†Stipend proportional to months, with increment second year.

University of Central Florida, Orlando 32816

MATHMATICS
Lokenath Debnath, Chairman

Teaching Assistantship (20:10) 6500-6700 9 870 20 Teaching, research, grading

THE GEORGE WASHINGTON UNIVERSITY

DEPARTMENT OF STATISTICS/COMPUTER & INFORMATION SYSTEMS

Graduate degree programs are offered leading to the M.S. in Applied Statistics, the M.A. in Mathematical Statistics, the M.S. in Computational Statistics, and the Ph.D. in Statistics.

Departmental areas of specialization include:
- Biostatistics
- Multivariate analysis
- Nonparametric inference
- Reliability
- Statistical computing

Washington, D.C. is an exciting location with many opportunities for professional contacts and cultural enrichment. The University is located in a prime area of the city with easy access to civic and cultural attractions.

Financial aid is available in the form of graduate teaching assistantships, with full tuition included, and research assistantships at the Biostatistics Center, a major research facility affiliated with the Department.

For further information and application materials please write
R. T. Smythe, Chairman
Department of Statistics/Computer & Information Systems
George Washington University
Washington, D.C. 20052
### University of Florida, Gainesville 32611

**INDUSTRIAL AND SYSTEMS ENGINEERING**

D. Jack Elzinga, Chairman

Graduate Students: full-time 45; full-time first year 16; part-time 3

<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES PAID BY SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching Assistantship</td>
<td>5600-8400</td>
<td>64.58/cr. 10-20 Grading, teaching</td>
<td>Ph. D. (84/87) OR 6. Total: 6</td>
</tr>
<tr>
<td>Research Assistantship</td>
<td>5600-8400</td>
<td>64.58/cr. 10-20 Research</td>
<td></td>
</tr>
</tbody>
</table>

**Applications due: 1/15/88**

Bachelor's by inst. 5258
Bachelor's by dept. 65
Master's by dept. 16

---

**University of Miami, Coral Gables 33124**

**MATHEMATICS AND COMPUTER SCIENCE**

Shair Ahmad, Chairman

Graduate Students: full-time 69; full-time first year 33; part-time 18

<table>
<thead>
<tr>
<th>Fellowship (2:0)</th>
<th>7000</th>
<th>9 83 Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching Assistantship (26:12)</td>
<td>7500-8500</td>
<td>9 83 6* Teaching</td>
</tr>
</tbody>
</table>

**Applications due: 3/15/88**

Bachelor's by inst. 1862
Bachelor's by dept. 33
Master's by dept. 20

---

**University of North Florida, Jacksonville 22216**

**MATHEMATICAL SCIENCES**

Leonard J. Lipkin, Chairperson

Graduate Students: full-time 9; full-time first year 5; part-time 20

| Teaching Assistantship (10:5) | 7500-8000 | 9 ** 15-20 Teaching, grading |

*Or until filled.
**In-state: $64.32 per credit hour; out-of-state: $189.29 per credit hour; waivers anticipated.

---

**University of South Florida, Tampa 33620**

**MATHEMATICS**

Kenneth L. Pothoven, Chairman

Graduate Students: full-time 48; full-time first year 13; part-time 11

<table>
<thead>
<tr>
<th>Fellowship (2:2)</th>
<th>5500-6000</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching Assistantship (40:20)</td>
<td>7500-9500</td>
<td>9 ** 8* P 3. Total: 7</td>
</tr>
</tbody>
</table>

*Full tuition waivers are available to qualified students.

---

**University of West Florida, Pensacola 32514**

**MATHEMATICS AND STATISTICS**

Donald R. Byrkit, Chairman

Graduate Students: full-time 2; full-time first year 9; part-time 22

| Teaching Assistantship (9:6) | 6000 | 9 |

---

**GRADUATE STUDY IN OPERATIONS RESEARCH AT DEPARTMENT OF INDUSTRIAL AND SYSTEMS ENGINEERING UNIVERSITY OF FLORIDA, GAINESVILLE, FL**

We invite applications from students with a solid mathematical background for graduate work in operations research and related disciplines. We offer curricula leading to the M.S. and Ph.D. degrees in which programs of study may be tailored to emphasize the individual interests of students. There are excellent opportunities for M.S. students, as well as for Ph.D. candidates, to work closely with the faculty on theoretical or applied research topics.

Application forms and additional information are available from:

GRADUATE COORDINATOR
DEPARTMENT OF INDUSTRIAL AND SYSTEMS ENGINEERING UNIVERSITY OF FLORIDA, GAINESVILLE, FL 32611

1234
Emory University, Atlanta 30322
MATHEMATICS AND COMPUTER SCIENCE (Ad on p. 1236) Applications due: 2/15/88 Bachelor’s by inst. 675
Peter Winkler, Chairman Faculty 20; Published 13 Bachelor’s by dept. 30
Graduate Students: full-time 28; full-time first year 6; part-time 6 Ph. D. (84/87) ANT 3. Total: 3
Fellowship (20-245-10) 7500-10000 9
Teaching Assistantship (20-245-10) 7500-10000 9 12-15 Grading, teaching
Tuition Waiver (5:5) 10000 4-6 Lab work or grading

Georgia Institute of Technology, Atlanta 30332
MATHEMATICS Faculty 44; Published 23 Bachelor’s by inst. 2000
William J. Kammerer, Acting Director Bachelor’s by dept. 38
Graduate Students: full-time 60; full-time first year 29; part-time 3 Master’s by dept. 9
Teaching Assistantship (36-10) 8190-9000 9 13 Teaching Ph. D. (84/87) AFA 1, P 1, AM 2. Total: 4
Research Assistantship (4:5) 7500 9 13 Research

University of Georgia, Athens 30002
MATHEMATICS Bachelor’s by inst. 3677
Ray A. Kunze, Head Bachelor’s by dept. 12
Faculty 47; Published 33 Master’s by dept. 27
Graduate Students: full-time 18; full-time first year 16; part-time 6 Ph. D. (84/87) AFA 1, GT 1, P 2. Total: 4
Teaching Assistantship (19:4) 6708-13415 9 1077 5-10 Teaching
Nonteaching Assistantship (6:6) 6288-12575 9 1077 10 Problem sessions, grading

MATHEMATICS EDUCATION Bachelor’s by inst. 3677
James W. Wilson, Head Bachelor’s by dept. 41
Faculty 10; Published 10 Master’s by dept. 13
Graduate Students: full-time 30; full-time first year 10; part-time 25 Ph. D. (84/87) ME 11. Total: 11
Teaching Assistantship (18:10) 6200-9600 9 200 13-18 Teaching
Research Assistantship (7:5) 6200-3600 9 200 13-18 Research

STATISTICS Bachelor’s by inst. 3677
Lynne Billard, Head Bachelor’s by dept. 19
Faculty 18; Published 16 Master’s by dept. 10
Graduate Students: full-time 37; full-time first year 9; part-time 11 Ph. D. (84/87) S 9. Total: 9
Graduate Assistantship (29:29) 6540-6976* 9 25* 13 Grading

*Estimated.

UNIVERSITY OF SOUTH FLORIDA – TAMPA, FLORIDA

GRADUATE STUDIES IN MATHEMATICS LEADING TO M.A. AND PH.D. DEGREES

Our 34 full time faculty members represent most areas of pure and applied mathematics and statistics. Programs leading to M.A. and Ph.D. degrees are available in Analysis, Applied Mathematics, Approximation Theory, Differential Equations, Number Theory, Probability, Computational Statistics, Statistics, Theoretical Computer Science, and other areas. Interdisciplinary programs with the College of Engineering and the College of Medicine are available. The special facilities of the department include an Institute for Constructive Mathematics, and a Center for Mathematical Sciences in which qualified students and faculty can become involved in consulting services to business, industries, hospitals, and schools in the Tampa Bay Area.

The University has approximately 30,000 students and three branch campuses. The main campus is located at the north edge of the city of Tampa. The area is a resort area boasting of a warm climate, and many recreational and cultural attractions.

Financial aid is available to qualified students in the form of Fellowships and Teaching Assistantships. Teaching Assistantships carry a stipend of between $7,500 and $9,500 for nine months. Tuition waivers are also available to qualified students. In addition, the Department nominates students each year to compete for Graduate Council Fellowships. These awards range between $5,500 and $6,000 for one year, plus tuition. For further information, write to:

Dr. K. L. Pothoven, Chairman — Department of Mathematics — University of South Florida — Tampa, FL 33620
### Hawaii

**University of Hawaii, Honolulu 96822**

**MATHEMATICS**

Ronald P. Brown, Chairman

Applications due: 3/1/88

Faculty 35; Published 31

Graduate Students: full-time 17; full-time first year 4; part-time 0

Teaching Assistantship (9:1) 6444-7164 9 3 Teaching

<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Total no.: no. anticipated) paid to student dollars</td>
<td>paid by student ($) months</td>
<td>hours type</td>
<td></td>
</tr>
</tbody>
</table>

Bachelor's by inst. 2603

Bachelor's by dept. 27

Master's by dept. 2

Ph. D. (84/87) ANT 2, AFA 2, L 1. Total: 5

---

### Emory University

**DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE**

The Department offers programs leading to the M.A., M.S., and Ph.D. degree in Mathematics-Computer Science and Statistics-Computer Science. Ph.D. students in Mathematics may specialize in many areas including algebra, analysis and combinatorics. Advanced study is supported by excellent library holdings and computing facilities.

**Financial Aid** - The Department offers aid in the form of teaching assistantships, fellowships, and tuition waivers. Awards carry a stipend of between $7,200 and $10,000 for nine months, plus tuition. Assistants typically teach one class per semester.

**Woodruff Fellowships** - The University also offers a number of Woodruff Fellowships carrying a $12,000 award and full tuition for three academic years. The Department may nominate five students to compete for these awards. Students with outstanding undergraduate records are particularly urged to apply for these awards.

**Additional summer support is also available for interested students.**

For information contact:

Ronald J. Gould
Department of Mathematics and Computer Science
Emory University
Atlanta, Georgia 30322

---

### M. A. and Ph.D. Programs at Hawaii

The University of Hawaii Mathematics Department has an excellent faculty of 35 members. The Ph.D. program is relatively new, and the small number of graduate students makes for an extremely favorable student-faculty ratio. The academic, living, and recreational environments are very agreeable. Teaching assistantships are available starting at $6444 plus a tuition waiver. Additional compensation is available for summer teaching.

For details write:

T. B. Hoover, Graduate Chairman – Department of Mathematics
University of Hawaii at Manoa – Honolulu, HI 96822

*AN EQUAL OPPORTUNITY EMPLOYER*
<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Total no. : no. anticipated)</td>
<td>paid to student</td>
<td>paid by student ($)</td>
<td>hours type</td>
<td>Academic year</td>
</tr>
<tr>
<td></td>
<td>dollars</td>
<td>months</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Idaho</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Idaho State University, Pocatello 83209</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHMATICS</td>
<td>Applications due: 3/15/88*</td>
<td>Bachelor's by inst.</td>
<td>636</td>
<td></td>
</tr>
<tr>
<td>Richard D. Hill, Chairperson</td>
<td>Faculty 14; Published 8</td>
<td>Bachelor's by dept.</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Fellowship (6-1)</td>
<td>Graduate Students: full-time 20; full-time first year 6; part-time 2</td>
<td>Master's by dept.</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (7-8)</td>
<td></td>
<td>Ph. D. (84/87) ANT 1, AFA 1, S 1, AM 1, Other 2. Total: 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Late applications considered.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>University of Idaho, Moscow 83843</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHMATICS AND APPLIED STATISTICS</td>
<td>Applications due: 3/15/88</td>
<td>Bachelor's by inst.</td>
<td>1110</td>
<td></td>
</tr>
<tr>
<td>James Calvert, Chairman</td>
<td>Faculty 19; Published 14</td>
<td>Bachelor's by dept.</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (20-4)</td>
<td>Graduate Students: full-time 20; full-time first year 8; part-time 5</td>
<td>Master's by dept.</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Illinois</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Eastern Illinois University, Charleston 61920</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHMATICS</td>
<td>Applications due: 2/15/88</td>
<td>Bachelor's by dept.</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>John LeDuc, Chairman</td>
<td>Faculty 28; Published 6</td>
<td>Master's by dept.</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (7-4)</td>
<td>Graduate Students: full-time 8; full-time first year 4; part-time 6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research Assistantship (3-1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Illinois Institute of Technology, Chicago 60616</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHMATICS</td>
<td>Applications due: 3/15/88</td>
<td>Bachelor's by inst.</td>
<td>450</td>
<td></td>
</tr>
<tr>
<td>M. J. Frank, Chairman</td>
<td>Faculty 13; Published 11</td>
<td>Bachelor's by dept.</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Fellowship (1-1)</td>
<td>Graduate Students: full-time 12; full-time first year 2; part-time 6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (8-3)</td>
<td></td>
<td>Master's by dept.</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Research Assistantship (1-8)</td>
<td></td>
<td>Ph. D. (84/87) AFA 3, AM 4. Total: 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Illinois State University, Normal 61781</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHMATICS</td>
<td>Applications due: 5/1/88</td>
<td>Bachelor's by inst.</td>
<td>3464</td>
<td></td>
</tr>
<tr>
<td>Jane O. Swanford, Chair</td>
<td>Faculty 47; Published 18</td>
<td>Bachelor's by dept.</td>
<td>73</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (18-9)</td>
<td>Graduate Students: full-time 24; full-time first year 10; part-time 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctoral Assistantship (6-3)</td>
<td></td>
<td>Master's by dept.</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Instructorship (17-3)</td>
<td></td>
<td>Ph. D. (84/87) ME 4. Total: 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Eight hours of tuition and fees waived.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Loyola University, Chicago 60626</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHEMATICAL SCIENCES</td>
<td>Applications due: 4/20/88</td>
<td>Bachelor's by inst.</td>
<td>1538</td>
<td></td>
</tr>
<tr>
<td>W. Cary Huffman, Chairman</td>
<td>Faculty 27; Published 14</td>
<td>Bachelor's by dept.</td>
<td>52</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (7-7)</td>
<td>Graduate Students: full-time 11; full-time first year 7; part-time 57</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Master's by dept.</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Northern Illinois University, Dekalb 60115</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHEMATICAL SCIENCES</td>
<td>Applications due: 3/1/88</td>
<td>Master's by dept.</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>John L. Selfridge, Chair</td>
<td>Faculty 57; Published 51</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (1-0)</td>
<td>Graduate Students: full-time 7; full-time first year 7; part-time 7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (47-20)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research Assistantship (5-4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1237
### Northwestern University, Evanston 60201

<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>applications due: 2/5/88</td>
<td>7700-9600</td>
<td>Waived</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>full-time 25, full-time first year 14, part-time 3</td>
<td>Fellowship (14:12)</td>
<td>Ph. D. (84/87)</td>
<td>Total: 13</td>
<td></td>
</tr>
<tr>
<td>full-time 25, full-time first year 14, part-time 3</td>
<td>Teaching Assistantship (5:2)</td>
<td>Bachelor's by dept.</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>full-time 25, full-time first year 14, part-time 3</td>
<td>Research Assistantship (6:2)</td>
<td>Bachelor's by inst.</td>
<td>1986-1987</td>
<td></td>
</tr>
</tbody>
</table>

**Engineering Sciences and Applied Mathematics**

W. E. Schmitendorf, Chairman | Faculty 11; Published 11 | 12-15 | Teaching, grading |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate Students:</td>
<td>7000-8000</td>
<td>Waived</td>
<td>12</td>
</tr>
<tr>
<td>full-time first year 14, part-time 3</td>
<td>Fellowship (14:12)</td>
<td>Grading, teaching</td>
<td></td>
</tr>
<tr>
<td>full-time first year 14, part-time 3</td>
<td>Teaching Assistantship (5:2)</td>
<td>Ph. D. (84/87)</td>
<td>Total: 13</td>
</tr>
</tbody>
</table>

**Industrial Engineering and Management Sciences**

Arthur P. Hurter, Jr., Chairman | Faculty 15; Published 15 | 12-15 | Research |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>full-time 25, full-time first year 18, part-time 8</td>
<td>Fellowship (14:12)</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>full-time 25, full-time first year 18, part-time 8</td>
<td>Teaching Fellowship (10:10)</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>full-time 25, full-time first year 18, part-time 8</td>
<td>Teaching Assistantship (10:10)</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>full-time 25, full-time first year 18, part-time 8</td>
<td>Research Assistantship (7:--)</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

**Mathematics**

Eric Friedlander, Chairman | Faculty 36; Published 25 | 12-15 | Research |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>full-time 25, full-time first year 9</td>
<td>Fellowship (14:12)</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>full-time 25, full-time first year 9</td>
<td>Teaching Fellowship (10:10)</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>full-time 25, full-time first year 9</td>
<td>Teaching Assistantship (10:10)</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>full-time 25, full-time first year 9</td>
<td>Research Assistantship (7:--)</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

**Southern Illinois University, Carbondale 62901**

**Mathematics**

Ronald B. Kirk, Chair | Faculty 47; Published 35 | 12-15 | Research |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>full-time 25, full-time first year 8, part-time 0</td>
<td>Fellowship (14:12)</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>full-time 25, full-time first year 8, part-time 0</td>
<td>Teaching Assistantship (28:5)</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

**Southern Illinois University, Edwardsville 62026**

**Mathematics and Statistics**

Robert N. Pendergrass, Chairman | Faculty 18; Published 11 | 12-15 | Teaching, grading |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>full-time 25, full-time first year 12, part-time 21</td>
<td>Teaching Assistantship (16:7-10)</td>
<td>9</td>
<td>120</td>
</tr>
<tr>
<td>full-time 25, full-time first year 12, part-time 21</td>
<td>Competitive Graduate Awards (25:25)</td>
<td>Bachelor's by inst.</td>
<td>1245</td>
</tr>
<tr>
<td>full-time 25, full-time first year 12, part-time 21</td>
<td></td>
<td>Bachelor's by dept.</td>
<td>29</td>
</tr>
<tr>
<td>full-time 25, full-time first year 12, part-time 21</td>
<td></td>
<td>Master's by dept.</td>
<td>7</td>
</tr>
</tbody>
</table>

**Applied Mathematics at Northwestern University**

Applied Mathematics is concerned with the solution of problems in the physical, engineering, life and social sciences which can be formulated as mathematical models. The curriculum encompasses courses in mathematical methods and in areas of application. Students are trained for careers in fields where mathematical tools play an essential role, including teaching, basic and industrial research.

The campus is located immediately north of Chicago adjacent to Lake Michigan. This location provides the combined advantages of a lovely suburban community and the many cultural opportunities of the metropolitan area.

Fellowships and assistantships ($7000-$9500, for nine months with full remission of tuition) are available with additional opportunity for summer support. Health service, hospitalization and surgical benefits are available.

For further information about M.S. and Ph.D. degrees in Applied Mathematics write to:

Professor W. E. Schmitendorf, Department of Engineering Sciences and Applied Mathematics
Northwestern University, Evanston, Illinois 60201

1238
**University of Chicago, Chicago 60637**

**COMPUTER SCIENCE**
Michael O'Donnell, Chairman

<table>
<thead>
<tr>
<th>Applications due: 3/31/88</th>
<th>Bachelor's by inst. 575</th>
<th>Master's by dept. 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fellowship (9:8)</td>
<td>900</td>
<td>9</td>
</tr>
<tr>
<td>Teaching Assistantship (16:10)</td>
<td>900</td>
<td>9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Faculty 12; Published 12</th>
<th>Graduate Students: full-time 24; full-time first year 6; part-time 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fellowship</td>
<td>900</td>
</tr>
<tr>
<td>Teaching Fellowship</td>
<td>900</td>
</tr>
<tr>
<td>Research Assistantship</td>
<td>900</td>
</tr>
</tbody>
</table>

**MATHEMATICS**
J. Peter May, Chairman

<table>
<thead>
<tr>
<th>Applications due: 1/1/88</th>
<th>Bachelor's by inst. 575</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty 42; Published 41</td>
<td>Master's by dept. 35</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Graduate Students: full-time 84; full-time first year 30; part-time 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fellowship (20:20)</td>
</tr>
<tr>
<td>Teaching Fellowship (20:0)</td>
</tr>
<tr>
<td>Teaching Assistantship (35:0)</td>
</tr>
<tr>
<td>Research Assistantship (5:0)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Teaching, grading</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Teaching</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Research Assistantship</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Teaching Assistantship</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
</tr>
</tbody>
</table>

**STATISTICS**
Stephen M. Stigler, Chairman

<table>
<thead>
<tr>
<th>Applications due: 2/1/88</th>
<th>Bachelor's by inst. 575</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty 14; Published 14</td>
<td>Master's by dept. 10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Graduate Students: full-time 16; full-time first year 6; part-time -</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fellowship (16:--)</td>
</tr>
<tr>
<td>Research Assistantship (5:0)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Teaching</th>
</tr>
</thead>
<tbody>
<tr>
<td>300</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Research Assistantship</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
</tr>
</tbody>
</table>

**NORTHWESTERN UNIVERSITY**

Graduate Studies in Mathematics

**DEGREE PROGRAMS:** The Ph.D. program at Northwestern is characterized by a faculty which is highly research-oriented, a faculty-graduate student ratio of approximately 1:1 and a tradition of close personal advising which has resulted in a high rate of success for our graduates. Our major areas of activity include algebraic topology and geometry, dynamical systems, partial differential equations, commutative algebra, harmonic analysis, complex analysis and probability theory.

**FINANCIAL AID:** All applicants are considered for fellowships, which provide a tuition waiver and a nine-month stipend of approximately $7600. The teaching responsibilities require two or three contact hours per week, substantially less than at many other universities. The high caliber of our undergraduate students has been consistently noticed by our teaching fellows.

**LOCATION:** Northwestern is located in the attractive suburb of Evanston, just north of Chicago on the shores of Lake Michigan. We have a beautiful lakefill campus and easy access to many cultural advantages of the city. These include the Chicago Symphony, Art Institute, Field Museum of Natural History, Museum of Science and Industry, and the Shedd Aquarium.

**APPLICATION:** For additional information and application forms, write to:

Director of Graduate Studies  
Department of Mathematics  
Northwestern University  
Evanston, IL 60208

The deadline for financial aid is January 15, 1988. *Early applications will be given special consideration.*
<table>
<thead>
<tr>
<th>UNIVERSITY</th>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Illinois, Chicago 60680</td>
<td>Applications due: 2/15/88</td>
<td>Faculty 81; Published 68</td>
<td>Graduate Students: full-time 119, full-time first year 33, part-time 108</td>
<td>Master's by dept.</td>
<td></td>
</tr>
<tr>
<td>Fellowships (5:3**)</td>
<td>7500</td>
<td>12</td>
<td>Waived</td>
<td>Research</td>
<td>Bachelor's by inst.</td>
</tr>
<tr>
<td>Teaching Fellowship (3:--)</td>
<td>8400-14100</td>
<td>12</td>
<td>Waived</td>
<td>6^2</td>
<td>Bachelor's by dept.</td>
</tr>
<tr>
<td>Teaching Assistantship (98:25**)</td>
<td>6000-8850</td>
<td>9</td>
<td>Waived</td>
<td>6^2</td>
<td>Master's by dept.</td>
</tr>
<tr>
<td>Research Assistantship (7:--)**</td>
<td>6600-7550</td>
<td>9</td>
<td>Waived</td>
<td>20</td>
<td>Master's by dept.</td>
</tr>
<tr>
<td>**Fellowships: 1/15/88; assistantships: 4/1/88. **Varies.</td>
<td>***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Illinois at Urbana-Champaign, Urbana 61801</td>
<td>Applications due: 2/15/88</td>
<td>Faculty 93; Published 65</td>
<td>Graduate Students: full-time 192, full-time first year 62; part-time 3</td>
<td>Bachelor's by dept.</td>
<td></td>
</tr>
<tr>
<td>Fellowships (4:4)</td>
<td>8100</td>
<td>9</td>
<td>390</td>
<td>Teaching</td>
<td>Master's by dept.</td>
</tr>
<tr>
<td>Teaching Fellowship (10:5)</td>
<td>8500-9500</td>
<td>9</td>
<td>390</td>
<td>3</td>
<td>Master's by dept.</td>
</tr>
<tr>
<td>Teaching Assistantship (130:25)</td>
<td>7000-7500</td>
<td>9</td>
<td>390</td>
<td>5</td>
<td>Master's by dept.</td>
</tr>
<tr>
<td>University at Urbana-Champaign, Urbana 61801</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowships (1:1)</td>
<td>7600-8000</td>
<td>9</td>
<td></td>
<td>Teaching</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (16:4)</td>
<td>7800-8000</td>
<td>9</td>
<td>20</td>
<td>Grading, teaching</td>
<td></td>
</tr>
<tr>
<td>Research Assistantship (14:2)</td>
<td>7800-8000</td>
<td>9</td>
<td>20</td>
<td>Research</td>
<td></td>
</tr>
<tr>
<td>Western Illinois University, Macomb 61455</td>
<td>Applications due: 3/1/88</td>
<td>Faculty 34; Published 21</td>
<td>Graduate Students: full-time 10; full-time first year 5; part-time 3</td>
<td>Bachelor's by dept.</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (8:5)</td>
<td>2000-4000</td>
<td>9</td>
<td>181-218</td>
<td>15</td>
<td>Bachelor's by dept.</td>
</tr>
<tr>
<td>Indiana</td>
<td>Applications due: 3/1/88</td>
<td>Faculty 32; Published 15</td>
<td>Graduate Students: full-time 13; full-time first year 5; part-time 6</td>
<td>Bachelor's by dept.</td>
<td></td>
</tr>
<tr>
<td>Ball State University, Muncie 47306</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematical Sciences</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Donald R. Whitaker, Chairman</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (21:8-9)</td>
<td>4225</td>
<td>9</td>
<td>150/term</td>
<td>15-20</td>
<td></td>
</tr>
<tr>
<td>Indiana State University, Terre Haute 47809</td>
<td>Applications due: 3/15/88</td>
<td>Faculty 45; Published 39</td>
<td>Graduate Students: full-time 119, full-time first year 33, part-time 108</td>
<td>Bachelor's by dept.</td>
<td></td>
</tr>
<tr>
<td>Regular (8--):</td>
<td>2800-3600</td>
<td>9</td>
<td>22.75/sem. hr.</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Indiana University, Bloomington 47405</td>
<td>Applications due: 2/1/88</td>
<td>Faculty 45; Published 39</td>
<td>Graduate Students: full-time 119, full-time first year 33, part-time 108</td>
<td>Bachelor's by dept.</td>
<td></td>
</tr>
<tr>
<td>Fellowship (1:1)</td>
<td>13000</td>
<td>9</td>
<td>15/cr. hr.</td>
<td>Teaching</td>
<td>B.S. (84/87) ANT 2, AFA 10,</td>
</tr>
<tr>
<td>Teaching Assistantship (1:7)</td>
<td>9600-10600</td>
<td>9</td>
<td>15/cr. hr.</td>
<td>18</td>
<td>GT 2, P 1, S 2, AM 3, Other 1.</td>
</tr>
<tr>
<td>Teaching Assistantship (140:40)</td>
<td>7800-9000</td>
<td>9</td>
<td>15/cr. hr.</td>
<td>20</td>
<td>Total: 21</td>
</tr>
<tr>
<td>Summer Teaching Assistantship (50:15)</td>
<td>1400-2000</td>
<td>2</td>
<td>15/cr. hr.</td>
<td>Teaching, grading, assisting</td>
<td></td>
</tr>
<tr>
<td>TYPE OF ASSISTANCE</td>
<td>STIPEND</td>
<td>FEES</td>
<td>SERVICE REQUIRED</td>
<td>DEGREES AWARDED</td>
<td></td>
</tr>
<tr>
<td>--------------------</td>
<td>---------</td>
<td>------</td>
<td>------------------</td>
<td>----------------</td>
<td></td>
</tr>
<tr>
<td>(Total no.: no. anticipated)</td>
<td>paid to student</td>
<td>paid by months</td>
<td>hours</td>
<td>type</td>
<td>Academic year</td>
</tr>
<tr>
<td><strong>Indiana University–Purdue University at Fort Wayne 46805</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MATHEMATICAL SCIENCES</strong></td>
<td>Applications due: 6/1/88</td>
<td>Bachelor's by inst. 500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M. J. Mansfield, Chairman</td>
<td>Faculty 18; Published 17</td>
<td>Bachelor's by dept. 10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Students: full-time 2; full-time first year 1; part-time 10</td>
<td>Master's by dept. 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (2:1)</td>
<td>4940</td>
<td></td>
<td>9</td>
<td>246</td>
<td>6</td>
</tr>
<tr>
<td><strong>Indiana University–Purdue University at Indianapolis 46223</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MATHEMATICAL SCIENCES</strong></td>
<td>Applications due: 3/1/88*</td>
<td>Bachelor's by inst. 1500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bart S. Ng, Chairman</td>
<td>Faculty 20; Published 17</td>
<td>Bachelor's by dept. 19</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Students: full-time 15; full-time first year 9; part-time 20</td>
<td>Master's by dept. 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (2:5)</td>
<td>8000**</td>
<td>Ph. D. (84/87) AFA 1. Total: 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (15:8)</td>
<td>6500-8000**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Foreign applicants: 2/1/88. **Additional support through summer teaching is available.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Purdue University, West Lafayette 47907</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>COMPUTER SCIENCES</strong></td>
<td>Applications due: 2/1/88</td>
<td>Bachelor's by inst. 5134</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>John R. Rice, Head</td>
<td>Faculty 30; Published 25-27</td>
<td>Bachelor's by dept. 165</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Students: full-time 125; full-time first year 45; part-time 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (10:--)</td>
<td>9600-12000</td>
<td>Ph. D. (84/87) CS 4. Total: 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (55:20)</td>
<td>7000-8600</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research Assistantship (30:--)</td>
<td>7000-10320</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (5:--)</td>
<td>7000-10320</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minority Fellowship (--)</td>
<td>9000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*$150 per semester; $80 per summer.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>INDUSTRIAL ENGINEERING</strong></td>
<td>Applications due: 3/15/88</td>
<td>Bachelor's by inst. 5134</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F. F. Leimkuhler, Head</td>
<td>Faculty 31; Published 31</td>
<td>Bachelor's by dept. 193</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Students: full-time 102; full-time first year 34; part-time 17</td>
<td>Master's by dept. 35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (2:2)</td>
<td>6900-9000</td>
<td>Ph. D. (84/87) OR 7, Other 17. Total: 24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Fellowship (5:5)</td>
<td>5600-7000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (42:15)</td>
<td>5600-6000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research Assistantship (28:10)</td>
<td>5600-7500</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XR (4:--)</td>
<td>6000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scholarship (1:--)</td>
<td>10000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MATHEMATICS</strong> (Ad on p. 1242)</td>
<td>Applications due: *</td>
<td>Bachelor's by inst. 5134</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joseph Lipman, Head</td>
<td>Faculty 68; Published 51</td>
<td>Bachelor's by dept. 162</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Students: full-time 150; full-time first year 55; part-time 2</td>
<td>Master's by dept. 29</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (1:3)</td>
<td>9000</td>
<td>Ph. D. (84/87) ANT 4, AFA 4, GT 4, L 3, AM 5, Other 2. Total: 22</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Fellowship (3:6)</td>
<td>10000-11000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (180:60)</td>
<td>7000-9500</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research Assistantship (15:--)</td>
<td>5750-8000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summer Teaching Assistantship (50:--)</td>
<td>1400-2000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summer Research Assistantship (25:--)</td>
<td>1150-160</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>STATISTICS</strong></td>
<td>Applications due: 5/31/88</td>
<td>Bachelor's by inst. 5134</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shanti S. Gupta, Head</td>
<td>Faculty 19; Published 17</td>
<td>Bachelor's by dept. 15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Students: full-time 54; full-time first year 19; part-time 3</td>
<td>Master's by dept. 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (7:2)</td>
<td>6900-9000</td>
<td>Ph. D. (84/87) P 1, S 11. Total: 12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (38:38)</td>
<td>5500-6700</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research Assistantship (5:0)</td>
<td>6900-7800</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
University of Notre Dame, Notre Dame 46556

MATHEMATICS
William G. Dwyer, Chairman

<table>
<thead>
<tr>
<th>Applications due: None</th>
<th>Bachelor’s by inst.</th>
<th>1773</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty 3; Published 24</td>
<td>Bachelor’s by dept.</td>
<td>34</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fellowship (11:11)</th>
<th>$8500-$8700</th>
<th>9</th>
<th>Ph. D. (84/87) ANT 3, AFA 4, GT 9, L 1. Total: 17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching Assistantship (25:0)</td>
<td>$7500-$7700</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

---

**TEACHING FELLOWSHIPS**  
Purdue University

The Department of Mathematics of Purdue University is offering a limited number of Teaching Fellowships to outstanding new graduate students. The stipend for two semesters will be at least $10,000 plus a reduction in fees to $160 per semester. The Fellowships are renewable and Fellows will usually teach four hours per week. Please read our other advertisement for more details concerning our programs.

---

**Purdue University - Department of Mathematics**

**Graduate Programs:** The department invites applications for graduate study in programs leading to the M.S. and Ph.D. degrees in pure or applied mathematics. A special M.S. program in applied mathematics specifies seven core courses and suggests elective courses in numerical analysis, statistics, or mathematical physics, with the majority of graduates finding employment in industry, research laboratories, or government. The Departments of Mathematics, Statistics, and Computer Science offer a wide range of courses that can also be supplemented by courses in engineering and science. The Department of Mathematics currently has 150 graduate students.

**Graduate Faculty.** The faculty research interests are in the following areas: Algebra, Algebraic Geometry, Applied Mathematics, Automorphic Forms, Complex Analysis, Complex Manifolds, Computational Mathematics and Numerical Analysis, Differential Geometry, Functional Analysis, Harmonic Analysis, Logic, Mathematics Education, Partial Differential Equations, Probability, Representations of Lie Groups, Several Complex Variables, and Topology.

**Center for Applied Mathematics.** Professor Jim Douglas Jr. is the Director of the Center. An emphasis year in Computational Mathematics and Numerical Analysis is planned for 1988–89.

**Fellowships.** Purdue University Fellowships and Black and Other Minorities Fellowships. The stipend is $9000 for twelve months.

**Teaching Assistantships.** Half-time assistants usually teach four hours per week. The salary range for two semesters (August 22 to May 6) will be $7,000–$9,500 with a minimum of $8,000 for most successful applicants who can be assigned to classroom teaching.

**Research Assistantships.** Many half-time assistantships are available to advanced students working on their thesis, with salary ranging from $575 to $800 per month.

**Summer Assistantships.** Half-time positions are available for assistants whose performance in course work and assistantship duties is satisfactory.

**Fees.** For holders of half-time assistantships and fellowships, fees for 1987–88 are reduced from $2694 ($908 for state residents) to $160 per semester and to $80 for summer.

**Applications.** For application forms and information write to: Graduate Office - Department of Mathematics - Mathematical Sciences Building - Purdue University - West Lafayette, IN 47907

*An Equal Access/Equal Opportunity University*
Iowa

Iowa State University, Ames 50011

MATHEMATICS
Kenneth A. Heimes, Chair

Graduate Students: full-time 87; full-time first year 23; part-time 15
Teaching Assistantship (67:20) 7500-8200 9 926** 4-6c Teaching
Research Assistantship (9:2) 7500-12600 9 926 20 Research
PACE (2:2)***

**Graduate College fellowships of $926 per year are available for qualified teaching assistants.
***Premium for Academic Excellence, based upon prior academic achievement and offered by the Graduate College.

MARKET STATISTICS
Dean L. Isaacson, Director and Head

Graduate Students: full-time 112; full-time first year 47; part-time 20
Teaching Assistantship (28:6) 850-900/mo. 9 463/sam.* 20 Teaching, service
Research Assistantship (33:7) 800-900/mo. 12 463/sam.* 20 Research, service
PACE**(10:10) 463/sam.

*Graduate assistants are reimbursed half of in-state tuition, total $926.
**By competition. An award offered by the Graduate College as a Premium for Academic Excellence (PACE) based on prior scholastic achievement.

UNIVERSITY OF NOTRE DAME
DEPARTMENT OF MATHEMATICS
GRADUATE STUDIES IN MATHEMATICS

The purpose of the graduate program in mathematics is to give students the opportunity to develop into educated and creative mathematicians. In most instances the doctoral program starts with two years of basic training, including introductory and advanced course work in the fundamentals of algebra, analysis, geometry, and topology. This is followed by thesis work done in close association with one or more members of the faculty. Limited enrollment and the presence of several active groups of research mathematicians provide thesis opportunities in many areas of algebra, algebraic geometry, complex analysis, differential geometry, logic, partial differential equations, and topology.

All new students receive a stipend of up to $8500 and have no teaching duties the first year. They then become teaching assistants with a stipend of over $7400 and begin the three stages of supervised teaching provided by the department. A teaching assistant usually starts by doing tutorial work in freshman and sophomore calculus courses (4 classroom hours per week); this is followed by a variety of duties in advanced undergraduate courses; the final, lecturing stage involves independent teaching in the classroom. All doctoral students in mathematics also receive a full tuition fellowship. Support is available for citizens and non citizens.

All new students receive a stipend of up to $8500 and have no teaching duties the first year. They then become teaching assistants with a stipend of over $7400 and begin the three stages of supervised teaching provided by the department. A teaching assistant usually starts by doing tutorial work in freshman and sophomore calculus courses (4 classroom hours per week); this is followed by a variety of duties in advanced undergraduate courses; the final, lecturing stage involves independent teaching in the classroom. All doctoral students in mathematics also receive a full tuition fellowship. Support is available for citizens and non citizens.

All applicants are urged to take the General Test and the mathematics test of the Graduate Record Examination. Application for these tests should be made to Educational Testing Service in Princeton, New Jersey 08541, or at 1947 Center Street, Berkeley, California 94705. While there is no final application date, completed forms should be filed before February 15. All applicants are considered without regard to race, sex, or religious affiliation.

Professor William G. Dwyer, Chairman--Department of Mathematics--University of Notre Dame--P.O. Box 398--Notre Dame, Indiana 46556.
<table>
<thead>
<tr>
<th>UNIVERSITY</th>
<th>MATHEMATICS AND COMPUTER SCIENCE</th>
<th>Applications due: 3/1/88</th>
<th>Bachelor's by inst. 3826</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Iowa, Iowa City 52242</td>
<td>Application 0; published 0</td>
<td>Faculty 0; published 0</td>
<td>Bachelor's by inst. 3826</td>
</tr>
<tr>
<td>Herbert W. Hethcote, Chair</td>
<td>Graduate Students: full-time 11; full-time first year 3; part-time 0</td>
<td>Bachelor's by dept. 86</td>
<td>Bachelor's by dept. 86</td>
</tr>
<tr>
<td>Teaching Assistantship (2-3-1)</td>
<td>8300-9000</td>
<td>Teaching, research</td>
<td>Master's by dept. 27</td>
</tr>
<tr>
<td>University of Iowa, Iowa City 52242</td>
<td>Applications due: 3/1/88</td>
<td>Bachelor's by inst. 3826</td>
<td></td>
</tr>
<tr>
<td>Computer Science</td>
<td>Application 0; published 0</td>
<td>Faculty 0; published 0</td>
<td>Bachelor's by dept. 86</td>
</tr>
<tr>
<td>Arthur C. Fleck, Chairman</td>
<td>Graduate Students: full-time 70; full-time first year 31; part-time 31</td>
<td>Bachelor's by dept. 28</td>
<td>Bachelor's by dept. 28</td>
</tr>
<tr>
<td>Teaching Assistantship (40:15-20)</td>
<td>8400-9400</td>
<td>Teaching, research</td>
<td>Master's by dept. 27</td>
</tr>
<tr>
<td>Research Assistantship (4-6-1-2)</td>
<td>9000-9500</td>
<td>Teaching, research</td>
<td>Master's by dept. 27</td>
</tr>
<tr>
<td>Teaching-Research Fellowship (3:1)</td>
<td>12000</td>
<td>Teaching, research</td>
<td>Master's by dept. 27</td>
</tr>
<tr>
<td>University of Iowa, Iowa City 52242</td>
<td>Applications due: 3/1/88</td>
<td>Bachelor's by inst. 3826</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>Application 0; published 0</td>
<td>Faculty 0; published 0</td>
<td>Bachelor's by dept. 86</td>
</tr>
<tr>
<td>William A. Kirk, Chairman</td>
<td>Graduate Students: full-time 82; full-time first year 21; part-time 2</td>
<td>Bachelor's by dept. 28</td>
<td>Bachelor's by dept. 28</td>
</tr>
<tr>
<td>Fellowship (1:1)</td>
<td>8600-12000</td>
<td>Teaching, research</td>
<td>Master's by dept. 27</td>
</tr>
<tr>
<td>Teaching Assistantship (85:15-20)</td>
<td>8000-9450</td>
<td>Teaching, research</td>
<td>Master's by dept. 27</td>
</tr>
<tr>
<td>Research Assistantship (5-6-0)</td>
<td>8000-9500</td>
<td>Teaching, research</td>
<td>Master's by dept. 27</td>
</tr>
<tr>
<td>University of Iowa, Iowa City 52242</td>
<td>Applications due: 3/1/88</td>
<td>Bachelor's by inst. 3826</td>
<td></td>
</tr>
<tr>
<td>Statistics and Actuarial Science</td>
<td>Application 0; published 0</td>
<td>Faculty 0; published 0</td>
<td>Bachelor's by dept. 86</td>
</tr>
<tr>
<td>J. Sedransk, Chairman</td>
<td>Graduate Students: full-time 103; full-time first year 21; part-time 2</td>
<td>Bachelor's by dept. 28</td>
<td>Bachelor's by dept. 28</td>
</tr>
<tr>
<td>Fellowship (1:-)</td>
<td>8600-9300*</td>
<td>Teaching, research</td>
<td>Master's by dept. 27</td>
</tr>
<tr>
<td>Teaching Assistantship (22:6-8)*</td>
<td>8600-9300*</td>
<td>Teaching, research</td>
<td>Master's by dept. 27</td>
</tr>
<tr>
<td>Research Assistantship (6.6-8)*</td>
<td>8600-9300*</td>
<td>Teaching, research</td>
<td>Master's by dept. 27</td>
</tr>
<tr>
<td>*Estimated.</td>
<td>9 1850* 16 Teaching</td>
<td>Ph. D. (84/87) S 5 Total: 6</td>
<td>Ph. D. (84/87) S 5 Total: 6</td>
</tr>
<tr>
<td>University of Northern Iowa, Cedar Falls 50614</td>
<td>Applications due: 3/1/88</td>
<td>Bachelor's by inst. 3826</td>
<td></td>
</tr>
<tr>
<td>Mathematics and Computer Science</td>
<td>Application 0; published 0</td>
<td>Faculty 0; published 0</td>
<td>Bachelor's by dept. 86</td>
</tr>
<tr>
<td>David R. Duncan, Head</td>
<td>Graduate Students: full-time 6; full-time first year 3; part-time 6</td>
<td>Bachelor's by dept. 86</td>
<td>Bachelor's by dept. 86</td>
</tr>
<tr>
<td>Research Assistantship (4:4)</td>
<td>4400</td>
<td>Teaching, research</td>
<td>Master's by dept. 7</td>
</tr>
<tr>
<td>Kansas State University, Manhattan 66506</td>
<td>Applications due: 3/15/88</td>
<td>Bachelor's by inst. 1723</td>
<td></td>
</tr>
<tr>
<td>Computing and Information Sciences</td>
<td>Application 0; published 0</td>
<td>Faculty 0; published 0</td>
<td>Bachelor's by dept. 82</td>
</tr>
<tr>
<td>Virgil Wallentine, Head</td>
<td>Graduate Students: full-time 88; full-time first year 20; part-time 5</td>
<td>Bachelor's by dept. 82</td>
<td>Bachelor's by dept. 82</td>
</tr>
<tr>
<td>Teaching Assistantship (34:9)</td>
<td>700-840</td>
<td>Teaching, research</td>
<td>Master's by dept. 7</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Application 0; published 0</td>
<td>Faculty 0; published 0</td>
<td>Master's by dept. 7</td>
</tr>
<tr>
<td>Louis Pigno, Head</td>
<td>Graduate Students: full-time 44; full-time first year 14; part-time 0</td>
<td>Bachelor's by dept. 3</td>
<td>Bachelor's by dept. 3</td>
</tr>
<tr>
<td>Teaching Assistantship (40:10)</td>
<td>7650</td>
<td>Teaching, research</td>
<td>Master's by dept. 3</td>
</tr>
<tr>
<td>Research Assistantship (2:0)</td>
<td>7380</td>
<td>Teaching, research</td>
<td>Master's by dept. 3</td>
</tr>
<tr>
<td>University of Pennsylvania, Philadelphia 19104</td>
<td>Applications due: 3/1/88</td>
<td>Bachelor's by inst. 783</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>Application 0; published 0</td>
<td>Faculty 0; published 0</td>
<td>Bachelor's by dept. 33</td>
</tr>
<tr>
<td>Helen Kriegsman, Chairman</td>
<td>Graduate Students: full-time 5; full-time first year 5; part-time 2</td>
<td>Bachelor's by dept. 33</td>
<td>Bachelor's by dept. 33</td>
</tr>
<tr>
<td>Teaching Assistantship (4:4)</td>
<td>4000</td>
<td>Teaching, research</td>
<td>Master's by dept. 5</td>
</tr>
<tr>
<td>Pittsburg State University, Pittsburg 66762</td>
<td>Applications due: 3/1/88</td>
<td>Bachelor's by inst. 783</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>Application 0; published 0</td>
<td>Faculty 0; published 0</td>
<td>Bachelor's by dept. 33</td>
</tr>
<tr>
<td>Helen Kriegsman, Chairman</td>
<td>Graduate Students: full-time 5; full-time first year 5; part-time 2</td>
<td>Bachelor's by dept. 33</td>
<td>Bachelor's by dept. 33</td>
</tr>
<tr>
<td>Teaching Assistantship (4:4)</td>
<td>4000</td>
<td>Teaching, research</td>
<td>Master's by dept. 5</td>
</tr>
<tr>
<td>Kansas State University, Manhattan 66506</td>
<td>Applications due: 3/15/88</td>
<td>Bachelor's by inst. 2540</td>
<td></td>
</tr>
<tr>
<td>Teaching and Information Sciences</td>
<td>Application 0; published 0</td>
<td>Faculty 0; published 0</td>
<td>Bachelor's by dept. 104</td>
</tr>
<tr>
<td>Virgil Wallentine, Head</td>
<td>Graduate Students: full-time 88; full-time first year 20; part-time 5</td>
<td>Bachelor's by dept. 104</td>
<td>Bachelor's by dept. 104</td>
</tr>
<tr>
<td>Teaching Assistantship (34:9)</td>
<td>700-840</td>
<td>Teaching, research</td>
<td>Master's by dept. 39</td>
</tr>
<tr>
<td>Kansas State University, Manhattan 66506</td>
<td>Applications due: 3/15/88</td>
<td>Bachelor's by inst. 2540</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>Application 0; published 0</td>
<td>Faculty 0; published 0</td>
<td>Bachelor's by dept. 104</td>
</tr>
<tr>
<td>Louis Pigno, Head</td>
<td>Graduate Students: full-time 44; full-time first year 14; part-time 0</td>
<td>Bachelor's by dept. 104</td>
<td>Bachelor's by dept. 104</td>
</tr>
<tr>
<td>Teaching Assistantship (40:10)</td>
<td>7650</td>
<td>Teaching, research</td>
<td>Master's by dept. 39</td>
</tr>
<tr>
<td>Research Assistantship (2:0)</td>
<td>7380</td>
<td>Teaching, research</td>
<td>Master's by dept. 39</td>
</tr>
<tr>
<td>University of Pennsylvania, Philadelphia 19104</td>
<td>Applications due: 3/1/88</td>
<td>Bachelor's by inst. 783</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>Application 0; published 0</td>
<td>Faculty 0; published 0</td>
<td>Bachelor's by dept. 33</td>
</tr>
<tr>
<td>Helen Kriegsman, Chairman</td>
<td>Graduate Students: full-time 5; full-time first year 5; part-time 2</td>
<td>Bachelor's by dept. 33</td>
<td>Bachelor's by dept. 33</td>
</tr>
<tr>
<td>Teaching Assistantship (4:4)</td>
<td>4000</td>
<td>Teaching, research</td>
<td>Master's by dept. 5</td>
</tr>
<tr>
<td>Pittsburg State University, Pittsburg 66762</td>
<td>Applications due: 3/1/88</td>
<td>Bachelor's by inst. 783</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>Application 0; published 0</td>
<td>Faculty 0; published 0</td>
<td>Bachelor's by dept. 33</td>
</tr>
<tr>
<td>Helen Kriegsman, Chairman</td>
<td>Graduate Students: full-time 5; full-time first year 5; part-time 2</td>
<td>Bachelor's by dept. 33</td>
<td>Bachelor's by dept. 33</td>
</tr>
<tr>
<td>Teaching Assistantship (4:4)</td>
<td>4000</td>
<td>Teaching, research</td>
<td>Master's by dept. 5</td>
</tr>
</tbody>
</table>
University of Kansas, Lawrence 66045

MATHEMATICS (Ad on p. 1246)
Charles J. Himmelberg, Chairman

Applications due: 3/15/88

Graduate Students: full-time 54; full-time first year 13; part-time -

Teaching Assistantship (50:15) 7425-7625 9 30/cr. hr. 20 Teaching

Other**

*For first consideration.
**NSF grant support available.

Wichita State University, Wichita 67208

MATHEMATICS AND STATISTICS
Buma Fridman, Chair

Applications due: 3/1/88

Graduate Students: full-time 30; full-time first year 14; part-time 6

Teaching Fellowship (5:3) 7500-10000 12 400-600 3 Teaching
Teaching Assistantship (16:9) 7000 9 400-600 5 Teaching

*Likely to increase.

Kentucky

Eastern Kentucky University, Richmond 40475

MATHEMATICS, STATISTICS AND COMPUTER SCIENCE
Charles H. Franke, Chair

Applications due: 4/15/88

Graduate Students: full-time 11; full-time first year 5; part-time 6

Teaching Assistantship (9:5) 3200-5500 9 3-6 Teaching

*Late applications may be considered.

UNIVERSITY OF KANSAS
Graduate Study in Mathematics

DEGREE PROGRAMS The Department of Mathematics offers graduate programs leading to the M.A. and Ph.D. degrees. Programs for these degrees can be designed to emphasize either pure or applied mathematics or statistics. A broad range of programs is possible, as the faculty is actively engaged in research in a variety of areas including algebra, analysis, functional analysis, operator theory, set theory, number theory, topology, combinatorics, differential equations, control theory, theoretical physics, numerical analysis, probability and statistics.

FINANCIAL AID Teaching assistantships in AY87-88 have stipends between $7425 and $7625 per academic year. Outstanding students may either supplement or replace teaching assistant stipends through scholarships or faculty NSF grants. Summer support is also available from teaching assistantships, scholarships and grants.

FEES Approximately $30.00 per semester credit hour. Outstanding applicants may have their fees paid by a fee scholarship.

APPLY TO: Director of Graduate Studies
Department of Mathematics
University of Kansas
Lawrence, KS 66045-2142
KANSAS STATE UNIVERSITY
Graduate Study in Mathematics

We offer a varied program of graduate study leading to the M.S. and Ph.D. degrees in mathematics.

Particular strengths of the department are harmonic analysis, applied mathematics, algebra, and finite geometry. We also have faculty actively pursuing such other research areas as categorical topology, global analysis, group theory, lattice theory, and number theory.

We offer teaching assistantships that pay at least $860 per month and also have a substantial endowment for scholarships, fellowships, and colloquia.

All graduate students are afforded close contact with the senior faculty. For additional information and application forms write to:

Director of Graduate Studies
Department of Mathematics
Cardwell Hall
Kansas State University
Manhattan, KS 66506
TYPE OF ASSISTANCE
(Total no.: no. anticipated)

STATISTICS
David M. Allen, Chairman

Applications due: 2/1/88
Faculty: 14; Published: 14
Graduate Students: full-time 34; full-time first year 11; part-time 1

Fellowship (1:1)
Teaching Assistantship (16:5)
Research Assistantship (4:0)

Applications due: 5/31/88
Faculty: 17; Published: 15
Graduate Students: full-time 10; full-time first year 5; part-time 18

Teaching Assistantship (8:4)
Research Assistantship (2:0)
Instructorship (5:2)

Applications due: 3/20/88
Faculty: 29; Published: 8
Graduate Students: full-time 2; full-time first year 2; part-time 5

Teaching Fellowship (2:4)

STIPEND FEES
YEAR REQUIRED

pau to student

paid by

hours

student ($) type

University of Louisville, Louisville 40292
M. S. Jacobson, Chairman

Bachelor's by inst. 2606
Master's by dept. 3
Ph. D. (84/87) P 1, S 5.
Total: 6

3500-6000
7500
6000-9000

500-

50

University of Kentucky, Lexington, KY 40506-0027

PRESIDENTIAL FELLOWSHIPS
At the University of Kentucky
$11,675/9 months plus paid tuition

All candidates for Teaching Assistantships in the Department of Mathematics are automatically considered for a university-wide fellowship— a Presidential Fellowship. This fellowship is offered to applicants of exceptional promise and includes a half-time teaching assignment of one course (3-4 contact hours per week) per semester. Applications are invited for the academic year 1988-89.

The Mathematics Department offers programs of graduate study in the traditional fields of pure and applied mathematics leading to the Ph.D. degree or the Master's degree. In addition, a Master's degree in Operations Research is offered jointly by the departments of Mathematics, Statistics, and Computer Science.

For more information and applications materials, call (606) 257-4653 or write:

Director of Graduate Studies
Department of Mathematics
University of Kentucky
Lexington, KY 40506-0027

Western Kentucky University, Bowling Green 42101
Robert C. Bueker, Head

Bachelor's by inst. 800
Bachelor's by dept. 40
Master's by dept. 7

Teaching Fellowship (2:4)

Director of Graduate Studies
Department of Mathematics
University of Kentucky
Lexington, KY 40506-0027

1247
Louisiana State University, Baton Rouge 70803

MATHEMATICS
K. B. Reid, Chairman (Professor)

Applications due: * Faculty 45; Published 41
Graduate Students: full-time 60; full-time first year 22; part-time 2

Fellowship (10:6) 1000-15000 12 1710 6* Teaching
Teaching Fellowship (2:1) 9751 9 1710 6* Teaching
Teaching Assistantship (60:20) 8551-8751 9 1710 6* Teaching

*Fellowship: 2/15/88; Assistantship: 3/15/88.

QUANTITATIVE BUSINESS ANALYSIS
Michael H. Peters, Chairman

Applications due: 3/15/88 Faculty 13; Published 10
Graduate Students: full-time 18; full-time first year 4; part-time 0

Teaching Assistantship (4:1) 5600-7200 9 50 6* Teaching
Research Assistantship (12:3) 4300-6600 9 50 20 Research

Louisiana Tech University, Ruston 71272

MATHEMATICS AND STATISTICS
Bill J. Atteberry, Head

Applications due: 3/15/88 Faculty 25; Published 5
Graduate Students: full-time 6; full-time first year 3; part-time 1

Teaching Assistantship (6:5) 5600-6000 9 900 12 Grading, teaching

$15,000 FELLOWSHIPS
LOUISIANA STATE UNIVERSITY

The Department of Mathematics of Louisiana State University is offering 4 Board of Regents Graduate Fellowships to superior students for graduate study in mathematics commencing in Fall 1988. The fellowships pay $15,000 per year and are renewable for 3 more years; a tuition supplement is added to the fellowship. Deadline for application: Feb. 15, 1988.

GRADUATE PROGRAMS. The Mathematics Department offers graduate programs leading to the M.A., M.S., and Ph.D. degrees in mathematics. Particularly strong areas of faculty research include algebraic and analytic geometry, algebraic and differential topology, combinatorics, graph theory, algebraic number theory, quadratic forms, functional analysis, harmonic analysis, lie groups, differential equations, probability and topological algebra.

FINANCIAL AID. In addition to the Board of Regents Fellowships, there are graduate teaching assistantships readily available. Particularly strong applicants will be placed in a University wide competition for the LSU Alumni Federation Graduate Fellowships. Applications for assistantships should be received by March 15, 1988 (Feb. 15, 1988 to receive consideration for the fellowships).

For information and application materials write to:
Professor William A. Adkins, Director of Graduate Studies, Department of Mathematics, Louisiana State University, Baton Rouge, LA 70803
McNeese State University, Lake Charles 70609

**Mathematics, Computer Science and Statistics**
Faculty 26; Published 6

- George F. Mead, Jr., Head
- Graduate Students: full-time 10; full-time first year 5; part-time 16

- **Teaching Assistantship (10:5)**: 4000
- **Stipend Fee**: 9
- **Fees**: 311
- **Service Required**: 6

- **Degrees Awarded**
  - Bachelor's by inst.: 810
  - Bachelor's by dept.: 22
  - Master's by dept.: 8

Tulane University, New Orleans 70118

**Mathematics (Ad on p. 1250)**
Faculty 27; Published 23

- James T. Rogers, Jr., Chairman
  - Graduate Students: full-time 28; full-time first year 8; part-time 1

- **Fellowship (2:2)**: 15000
- **Teaching Fellowship (4:0-4)**: 15000
- **Teaching Assistantship (28:12)**: 7000-7200*

*This amount is the stipend being paid for 1987-88. A raise is anticipated for 1988-89.

University of Southwestern Louisiana, Lafayette 70504

**Mathematics (Ad on p. 1251)**

- Victor Schneider, Chairman
- Faculty 40; Published 23
  - Graduate Students: full-time 26; full-time first year 5; part-time 2

- **Fellowship (4:3)**: 12000
- **Teaching Assistantship (22:6)**: 4500-7000

University of Maine at Orono 04469

**Mathematics**

- Gratton Murphy, Chairman
- Faculty 30; Published 15
  - Graduate Students: full-time 9; full-time first year 4; part-time 1

- **Teaching Assistantship (-:-)**: 5300
- **Teaching**: 6

Maryland

Johns Hopkins University, Baltimore 21218

**Mathematical Sciences**

- Robert J. Serfling, Chairman
- Faculty 16; Published 16
  - Graduate Students: full-time 20; full-time first year 7; part-time 1

- **Fellowship (4:1)**: 10000
- **Teaching Fellowship (1:1)**: 9500
- **Teaching Assistantship (12:3-4)**: 9100
- **Research Assistantship (3:-)**: 9100

*For first round consideration.

- **Mathematics**
  - Jean-Pierre Meyer, Chairman
    - Faculty 16; Published 16
      - Graduate Students: full-time 34; full-time first year 9; part-time 1

- **Fellowship (1:-)**: 8000
- **Teaching Assistantship (24:4-6)**: 6250-8000
- **Tuition (10:-)**: 8000

University of Maryland Baltimore County, Catonsville 21228

**Applied Mathematics and Statistics**

- James M. Greenberg, Chairman
- Faculty 24; Published -
  - Graduate Students: full-time 30; full-time first year 11; part-time 57

- **Fellowship (1:0-2)**: 10000
- **Teaching Assistantship (21:23)**: 7200-8300

- **Ph. D. (84/87) AM 2, Other 2. Total: 10**
The Ph.D. Program provides a broad background in mathematics and requires a dissertation consisting of original and significant research. The research strengths of the faculty are in the areas of Algebra, Numerical Computation, Partial Differential Equations, Relativity, Several Complex Variables and Differential Geometry, Statistics, Topological Algebra and Topology.

The Master's Degree Programs in Mathematics, in Applied Mathematics and in Applied Statistics are tailored to the students' interests and often involve coursework in other departments of the university. They prepare the student either for a variety of employment opportunities or for the Ph.D. program.

Applications from qualified students are invited. For advanced students, some transfer credits are possible.

**$15,000 FELLOWSHIPS**

Tulane has two fellowships (provided by the Louisiana Board of Regents) for students seeking the Ph.D. in Mathematics. No teaching is required. The fellowship is renewable for up to four years. The stipend is $15,000 for twelve months plus a tuition waiver.

**TEACHING ASSISTANTSHIPS**

The teaching assistantship consists of a stipend and a tuition waiver. The current stipend is $7000-7200 (a raise is anticipated for the coming year). The duties consist of four contact hours per week. Four special teaching fellowships paying $10,700 per academic year are also available to more advanced students.

For information please contact:

The Chairman,  
Graduate Studies Committee  
Department of Mathematics  
Tulane University  
New Orleans, Louisiana 70118
<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>paid to student ($)</td>
<td>paid by student ($)</td>
<td>hours</td>
<td>type</td>
</tr>
<tr>
<td></td>
<td>dollars</td>
<td>months</td>
<td></td>
<td>Academic year</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1986-1987</td>
</tr>
<tr>
<td>University of Maryland, College Park 20742</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHMATICS (Ad on p. 1252)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nelson G. Markley, Chairman</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Applications due: 3/1/88</td>
<td>Faculty 91; Published 80</td>
<td>Graduate Students: full-time 160; full-time first year 45; part-time 50</td>
<td>Bachelor's by inst. 5570</td>
<td></td>
</tr>
<tr>
<td>Fellowship (15:--)</td>
<td>7300-9300</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (118:5:120)</td>
<td>7650-8650</td>
<td>10</td>
<td>170</td>
<td>4-6; Teaching</td>
</tr>
<tr>
<td>Research Assistantship (14:--)</td>
<td>7650-8650</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>paid to student</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Massachusetts</td>
<td></td>
<td></td>
<td></td>
<td>Bachelor's by dept. 43</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Master's by dept. 16</td>
</tr>
<tr>
<td>Babson College, Babeon Park 02157</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHMATICS AND SCIENCE</td>
<td>Faculty 16; Published 16</td>
<td>Graduate Students: full-time 300; full-time first year 160; part-time 1200</td>
<td>Bachelor's by inst. 300</td>
<td></td>
</tr>
<tr>
<td>John C. Saber, Chairman</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (12:12)</td>
<td>1920-2049</td>
<td>9</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Scholarship (-:6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Partial tuition remission.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boston College, Chestnut Hill 02187</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHMATICS (Ad on p. 1253)</td>
<td>Faculty 22; Published 17</td>
<td>Graduate Students: full-time 16; full-time first year 9; part-time 2</td>
<td>Bachelor's by inst. 2097</td>
<td></td>
</tr>
<tr>
<td>Robert J. Bond, Chairman</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Fellowship (12:6)</td>
<td>7200-7600</td>
<td>9</td>
<td>6</td>
<td>Teaching</td>
</tr>
<tr>
<td>*Only for entering Ph.D.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boston University, Boston 02215</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COMPUTER SCIENCE</td>
<td>Faculty 15; Published 11</td>
<td>Graduate Students: full-time 68; full-time first year 25; part-time 33</td>
<td>Bachelor's by inst. 2998</td>
<td></td>
</tr>
<tr>
<td>Steve Homer, Chairman</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (0:up to 7)*</td>
<td>8000</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Fellowship (14:4)</td>
<td>8000</td>
<td>9</td>
<td>15-20</td>
<td>Teaching, grading</td>
</tr>
<tr>
<td>Research Assistantship (12:2)</td>
<td>8000</td>
<td>9-12</td>
<td>10-20</td>
<td>Research</td>
</tr>
<tr>
<td>$12,000 Fellowships</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The University of Southwestern Louisiana has a number of duty-free fellowships for students seeking a Ph.D. in Mathematics. The stipend is $12,000 per fiscal year and the fellowship can be renewed for up to three years. High GRE scores and high GPA are required. Qualified black students are encouraged to apply. For further information contact:

Bradd Clark
Department of Mathematics
University of Southwestern Louisiana
Lafayette, LA 70504
Graduate Study in Mathematics at
UNIVERSITY OF MARYLAND, COLLEGE PARK

Ph.D. and M.A. degrees are available in each of the three Graduate Programs:

○ MATH  The Mathematics Program
  The Department is strongly represented in Analysis, Topology, Geometry, Number Theory, Logic, Differential Equations, and Numerical Analysis, allowing the student to develop expertise in a variety of areas.

○ MAPL  The Interdisciplinary Applied Mathematics Program
  The Program is sponsored by 12 departments and offers a flexible course of study which combines mathematics with an area of application (such as Physics, Operations Research, Fluid Dynamics, Computer Software, Continuum Mechanics, Systems and Control Theory, etc.)

○ STAT  The Mathematical Statistics Program
  This is a flexible program enabling students to emphasize either mathematical aspects (such as Asymptotic Theory, Stochastic Processes) or applications of statistics (such as Biostatistics, Time Series, Analysis of Variance).

MATH — STAT FACULTY: There are about 100 faculty members, including a number of Guggenheim and Sloan fellows. Many of the faculty members are internationally recognized in their field.

MAPL FACULTY: There are over 100 participating faculty members, drawn from the Departments of Mathematics; Aerospace, Chemical, Civil, Electrical, and Mechanical Engineering; Computer Science; Meterology; Physics; Economics; Business and Management; as well as the Mathematical Statistics Program, the Public Management Program and the Institute for Physical Science and Technology. Again, this faculty is comprised of many highly distinguished members.

RESEARCH CLIMATE: There is an active seminar program which features a number of distinguished visitors from throughout the world, as well as internal speakers. In addition, each year is designated a “Special Year” in a particular area of mathematics.

FINANCIAL AID: Teaching assistantships are readily available to qualified students. Fellowships to outstanding applicants are available.

FOR FURTHER INFORMATION, PLEASE WRITE TO:

Office of Graduate Studies
Department of Mathematics
UNIVERSITY OF MARYLAND
College Park, MD 20742
TYPE OF ASSISTANCE
(Total no. : no. anticipated)

STIPEND
paid to student
dollars months

FEES
paid by
student ($)

SERVICE REQUIRED
hours type

DEGREES AWARDED
Academic year
1986-1987

MATHMATICS
Ralph B. D'Agostino, Chair

Applications due: 2/1/88*
Graduate Students: full-time 63; full-time first year 11; part-time 15

Fellowship (0:2) 8000-9000** 9
Teaching Fellowship (20:19) 8000** 9 20 Teaching, tutoring, grading
Teaching Assistantship (3:0)*** 9
Research Assistantship (4:2) 8000-9000** 9 20 Research

*Late applications accepted until 5/1/88.
**Salary information based on 1987-1988 rates.
***Tuition assistance only.

Applications due: 2/15/88
Graduate Students: full-time 49; full-time first year 15; part-time 8
Teaching Fellowship (35:10) 7000-7400 9 8-10 Teaching, grading

Applications due: 2/1/88
Graduate Students: full-time 47; full-time first year 16; part-time 4
Fellowship (20:8) 6000-9000 12 10945 8 Teaching, research
Research Assistantship (4:0) 11000-15000 12 30 Research

Applications due: 2/1/88
Graduate Students: full-time 58; full-time first year 13; part-time -
Fellowship (35:- )* 17500-21500 12
Teaching Fellowship (10:0)* 3645-7290 12
Research Assistantship (13:0) 4500-11000 10-12 Research

*Combination of Harvard grant-in-aid, outside fellowships, teaching fellowship, or research assistantship.

Boston College
Graduate Programs in Mathematics

The Department of Mathematics at Boston College offers a flexible M.A. program. Courses are offered in pure and applied math and in computer science. In addition, the Department offers a program leading to the Master of Science in Teaching (M.S.T.) degree in cooperation with the University's Department of Education. Financial aid, including full-time teaching fellowships, is available.

For information and applications, contact:
W. J. Keane
Chairman, Graduate Committee
Department of Mathematics
Boston College
Chestnut Hill, Mass. 02167

1253
<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>paid to student</td>
<td>paid by</td>
<td>hours type</td>
<td>Academic year</td>
</tr>
<tr>
<td></td>
<td>dollars</td>
<td>months student ($)</td>
<td></td>
<td>1986-1987</td>
</tr>
</tbody>
</table>

Massachusetts Institute of Technology, Cambridge 02139

MATHEMATICS
Arthur Mattuck, Chairman

Applications due: 1/15/88
Faculty 56; Published 50

Graduate Students: full-time 135; full-time first year 30; part-time 0

Ph. D. (84/87) ANT 10, AFA 2
GT 15, L 4, P 5, S 4, CS 9,
OR 1, AM 6, Other 12.

Fellowship (25:7) 8100-15000 9
11100-14000 12

Teaching Assistanship (47:8) 8640 8
Teaching, grading

Research Assistantship (23:4) 8100 9
Varies Research

Total: 68

Northeastern University, Boston 02115

MATHEMATICS
M. E. Gilmore, Chairman

Applications due: 3/15/88
Faculty 53; Published 43

Graduate Students: full-time 50; full-time first year 15; part-time 23

Ph. D. (84/87) ANT 2, S 2,
OR 2, Other. Total: 10

Teaching Assistantship (36:-) 7000
Tuition only

4-8 Grading, workshop

*Three hours teaching and three hours conference.

Tufts University, Medford 02155

MATHEMATICS
Richard Weiss, Chairman
Applications due: 3/15/88
Faculty 20; Published 15

Graduate Students: full-time 13; full-time first year 5; part-time 0

Ph. D. (84/87) P 1. Total: 1

Teaching Assistantship (11:2) 7500-8000 9

*Normally covered by tuition remission.

Harvard’s Department of Biostatistics is one of the country’s leading centers of biostatistical research and education. We offer graduate programs leading to Masters and Doctoral degrees in Biostatistics, Biomedical Computing, and Health Decision Sciences. Research interests of the faculty include survival and sequential analysis, longitudinal studies, statistical computing, and cost-effectiveness of medical therapies. Primary areas of collaborative research include the etiology, diagnosis, and treatment of cancer, problems of environmental health, and emerging issues such as the AIDS epidemic and health promotion. The Department consists of more than 25 full-time faculty and about 50 full-time students, creating a favorable environment for faculty-student interaction. Students are encouraged to participate actively in the Department’s research activities.

Financial aid opportunities are excellent, and include traineeships from the National Institutes of Health, tuition scholarships from the School, and research assistantships. Applications should be submitted no later than February 1, 1988, and early applications are considered upon receipt. For further information, contact

Admissions Committee
Department of Biostatistics
Harvard School of Public Health
677 Huntington Avenue
Boston, MA 02115
<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Total no. : no. anticipated)</td>
<td>paid to student</td>
<td>paid by student ($)</td>
<td>hours</td>
<td>type</td>
</tr>
</tbody>
</table>

**University of Lowell, Lowell 01854**

**MATHEMATICS**

Charles L. Byrne, Chairman

Applications due: 4/1/88

Graduate Students: full-time 100; full-time first year 28; part-time 78

Teaching Assistantship (9:7) 6500 9 120.50 18

**University of Massachusetts, Amherst 01003**

**MATHEMATICS AND STATISTICS**

Larry N. Mann, Chairman

Applications due: 2/1/88

Graduate Students: full-time 55; full-time first year 13; part-time 1

Fellowship (1.5:0) 3000-6000 9

Teaching Assistantship (43:10-12) 7500-8000 9 2-4^c

Research Assistantship (4:0)

**University of Massachusetts at Boston 02125**

**MATHEMATICS AND COMPUTER SCIENCE**

Colin Godfrey, Chair

Applications due: 8/1/88

Graduate Students: full-time 115; full-time first year 20; part-time 22

Teaching Assistantship (11:5) 4000-6000 9 Waived 15-20

**Worcester Polytechnic Institute, Worcester 01609**

**MATHEMATICAL SCIENCES** (Ad on p. 1256)

Samuel M. Rankin III, Head

Applications due: 2/15/88

Graduate Students: full-time 12; full-time first year 5; part-time 7

Fellowship (2:2) 15000 12

Teaching Assistantship (6:3) 7000 9 20 Grading, teaching

**Michigan**

**Central Michigan University, Mt. Pleasant 48859**

**MATHEMATICS**

Richard J. Fleming, Chairman

Faculty 39; Published 20

Graduate Students: full-time 8; full-time first year 5; part-time 0

Fellowship (12*:12) 4200 9

Teaching Assistantship (10:5) 5200-5500 9 6^c

*This is for the entire University not just Mathematics.

---

**University of Massachusetts at Amherst**

**GRADUATE STUDIES:** Programs leading to M.S. in Mathematics (with special options in Applied Mathematics and Statistics), Ph.D. in Mathematics or Statistics. Unusually broad range of faculty research interests.

**TEACHING ASSISTANTSHIPS:** 3–4 contact hours per week. Tuition waiver. Especially qualified applicants may be nominated for University fellowships, or may receive summer supplement.

**ATTRACTIVE LOCATION:** Five College area in the beautiful Pioneer Valley. Easy access to Boston and New England ski and recreation areas. University housing available. Free local bus system.

**INFORMATION:** Write to Director of Graduate Admissions, Dept. of Mathematics and Statistics, U. Massachusetts, Amherst, MA 01003, or call (413) 545-2282.
<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Total no.: no. anticipated)</td>
<td>paid to student</td>
<td>paid by</td>
<td>hours</td>
<td>type</td>
</tr>
<tr>
<td></td>
<td>dollars</td>
<td>months</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Michigan State University, East Lansing 48824**

**STATISTICS AND PROBABILITY**

Dennis Gilliland, Chairman

Applications due: Open

Faculty 15; Published 15

Graduate Students: full-time 60; full-time first year 25; part-time 5

| Fellowship (2:2) | 9000-12000 | 9 | 2000 |
| Teaching Assistance (35:10) | 8700-9500 | 9 | 2000 | 10-15 Teaching, grading |
| Research Assistance (1:1) | 9500-10000 | 9 | 2000 | 15 Research |
| Scholarship (5:3) | 1000-2000 | 12 | 2000 |

**Michigan Technological University, Houghton 49931**

**MATHEMATICAL SCIENCES**

Martyn R. Smith, Head

Applications due: 5/13/88

Faculty 38; Published 28

Graduate Students: full-time 13; full-time first year 9; part-time 1

| Teaching Assistantship (9:4) | 6600 | 9 | 15 Teaching |

**Oakland University, Rochester 48063**

**MATHEMATICAL SCIENCES**

Donald E. G. Malm, Chairperson

Applications due: 3/15/88

Faculty 29; Published 25

Graduate Students: full-time 12; full-time first year 2; part-time 9

| Teaching Assistantship (4:1) | 6000-6500 | 9 | 20 Teaching |

**University of Michigan, Ann Arbor 48109**

**BIOSTATISTICS**

Graham Kalton, Chairman

Applications due: 4/15/88

Faculty 14; Published 14

Graduate Students: full-time 51; full-time first year 18; part-time 1

| Teaching Assistantship (10:4) | 1912 | 8 | 2257 | 10-12 Teaching |
| Research Assistantship (10:4) | 1912 | 8 | 2257 | 10-12 Research |

**INDUSTRIAL AND OPERATIONS ENGINEERING**

Stephen Pollock, Chairman

Applications due: 3/15/88

Faculty 21; Published 21

Graduate Students: full-time 80; full-time first year 20; part-time 0

| Fellowship (6:2) | 15000 | 12 |
| Teaching Assistantship (20:5) | 4000-8000 | 9 | 10 |
| Research Assistantship (20:5) | 4000-8000 | 9 | 10 |

**Financial aid** in the form of teaching assistantships is available to qualified applicants. These opportunities include tuition remission and a monthly stipend.

**Industrial demand** for applied mathematicians with graduate degrees is strong and growing.

**Practical experience** in modeling is an important component of WPI's applied mathematics program.

**MASTERS IN APPLIED MATHEMATICS**

**WORCESTER POLYTECHNIC INSTITUTE**

Mathematical Sciences Department

Worcester Polytechnic Institute

100 Institute Road

Worcester, MA 01609
<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Total no.: no. anticipated)</td>
<td>paid to student</td>
<td>paid by student ($)</td>
<td>hours</td>
<td>type</td>
</tr>
<tr>
<td><strong>MATHMATICS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. J. Lewis, Chairman</td>
<td>Applications due: 2/1/88</td>
<td>Graduate Students: full-time 145; full-time first year 53; part-time 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (24:7)</td>
<td>8250-12000</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (105:25)</td>
<td>7652</td>
<td>55</td>
<td>4* Teaching</td>
<td></td>
</tr>
<tr>
<td>Research Assistantship (12:--)</td>
<td>7652</td>
<td>55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Assistantship (50:10)</td>
<td>576-12728</td>
<td>8</td>
<td>4-12 Grading</td>
<td></td>
</tr>
<tr>
<td><strong>WANE STATE UNIVERSITY, DETROIT 48202</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>COMPUTER SCIENCE</strong></td>
<td>Applications due: 2/28/88</td>
<td>Graduate Students: full-time 55; full-time first year 10; part-time 124</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vaclav Rajlich, Chairman</td>
<td>Faculty 13; Published 11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (2:--)</td>
<td>5500</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (33:20)</td>
<td>4500-6600</td>
<td>9</td>
<td>20 Teaching, grading</td>
<td></td>
</tr>
<tr>
<td>Research Assistantship (17:17)</td>
<td>5800-8000</td>
<td>9</td>
<td>20 Research</td>
<td></td>
</tr>
<tr>
<td><strong>WESTERN MICHIGAN UNIVERSITY, KALAMAZOO 49008</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MATHMATICS AND STATISTICS</strong></td>
<td>Applications due: 2/15/88</td>
<td>Graduate Students: full-time 57; full-time first year 20; part-time 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joseph T. Buckley, Chairperson</td>
<td>Faculty 34; Published 23</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (5:1)</td>
<td>5250-8500</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (26:10)</td>
<td>6250-8000</td>
<td>8</td>
<td>6-8</td>
<td></td>
</tr>
<tr>
<td>Internship (7:--)</td>
<td>3500-4500</td>
<td>4</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>*Resident: $68.25 per hour; nonresident: $165 per hour.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**WESTERN MICHIGAN UNIVERSITY**

The Department of Mathematics and Statistics at Western Michigan University consists of 36 full-time faculty members with specialists in most areas of mathematics and statistics.

**DEGREE PROGRAMS**

WMU offers master's degrees in Mathematics, Biostatistics, Statistics, (Applied or Theoretical options available), Applied Mathematics, Computational Mathematics, and Mathematics Education. In addition to the Ph.D. in Mathematics, the department also offers a Ph.D. in Statistics, a concentration in Graph Theory and Computer Science, and a specialization in college mathematics teaching.

**SPECIAL OPPORTUNITIES**

The Department is internationally acclaimed in the field of graph theory. In 1988 the Department will sponsor the Sixth International Research Conference on the Theory and Applications of Graphs. A unique Master's in Biostatistics, developed in cooperation with the pharmaceutical industry, trains graduates to meet needs of prospective employers.

Paid internships are included in programs in Biostatistics and Applied Statistics.

**FINANCIAL ASSISTANCE**

In 1988 Graduate Teaching Assistantships with a stipend of $6,250 are available for the academic year. A limited number of Senior Assistantships with a stipend of $8,000 and Doctoral Fellowships of $6,900 are also available. Additional $1,250 assistantships are available for Spring or Summer session. Applications for Fellowships and Assistantships are due by February 15. Late applications for assistantships will be accepted if openings remain.

For additional information contact
Dr. Joseph Buckley
Department of Mathematics and Statistics
Western Michigan University
Kalamazoo, MI 49008-3699

WMU is an Equal Opportunity/Affirmative Action Institution.
## Minnesota

### Bemidji State University, Bemidji 56601

**Mathematics and Computer Science**

<table>
<thead>
<tr>
<th>Type of Assistance</th>
<th>Stipend</th>
<th>Fees</th>
<th>Service Required</th>
<th>Degrees Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching Assistantship (3:3)</td>
<td>4000</td>
<td>9</td>
<td>2000</td>
<td>Bachelor's by inst. 800</td>
</tr>
</tbody>
</table>

Elaine Bohanon, Chairman

Graduate Students: full-time 4; full-time first year 3; part-time 2

### Mankato State University, Mankato 56001

**Mathematics, Astronomy and Statistics**

<table>
<thead>
<tr>
<th>Type of Assistance</th>
<th>Stipend</th>
<th>Fees</th>
<th>Service Required</th>
<th>Degrees Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching Assistantship (20:15)</td>
<td>2500-5000</td>
<td>9</td>
<td>10-15</td>
<td>Bachelor's by inst. 1965</td>
</tr>
</tbody>
</table>

Francis T. Hannick, Chairperson

Graduate Students: full-time 75; full-time first year 35; part-time 10

### University of Minnesota, Minneapolis 55455

**Biometry**

<table>
<thead>
<tr>
<th>Type of Assistance</th>
<th>Stipend</th>
<th>Fees</th>
<th>Service Required</th>
<th>Degrees Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fellowship (1:1)</td>
<td>1000-3000</td>
<td>9</td>
<td></td>
<td>Master's by dept. 10</td>
</tr>
<tr>
<td>Teaching Assistantship (3:3)</td>
<td>9</td>
<td>20</td>
<td></td>
<td>Teaching, grading</td>
</tr>
<tr>
<td>Research Assistantship (4:4)</td>
<td>12</td>
<td>20</td>
<td></td>
<td>Research</td>
</tr>
</tbody>
</table>

Thomas A. Louis, Head

Graduate Students: full-time 7; full-time first year 5; part-time 5

### Computer Science

<table>
<thead>
<tr>
<th>Type of Assistance</th>
<th>Stipend</th>
<th>Fees</th>
<th>Service Required</th>
<th>Degrees Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fellowship (1-:-)</td>
<td>8000</td>
<td>9</td>
<td></td>
<td>Ph. D. (84/87) S 11. Total: 11</td>
</tr>
<tr>
<td>Teaching Fellowship (11-:-)</td>
<td>7900-9350*</td>
<td>9</td>
<td>20</td>
<td>Grading, teaching</td>
</tr>
<tr>
<td>Teaching Assistantship (40-:-)</td>
<td>7900-9350*</td>
<td>9</td>
<td>20</td>
<td>Grading, teaching</td>
</tr>
<tr>
<td>Research Assistantship (41:varies)</td>
<td>7900-9350*</td>
<td>9</td>
<td>20</td>
<td>Research</td>
</tr>
</tbody>
</table>

David W. Fox, Head

Graduate Students: full-time 210; full-time first year 35; part-time 65

*This is the total amount a student would receive if student worked 50% for a nine month period.

**Mathematics**

<table>
<thead>
<tr>
<th>Type of Assistance</th>
<th>Stipend</th>
<th>Fees</th>
<th>Service Required</th>
<th>Degrees Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching Fellowship (4-6:4-6)</td>
<td>12300</td>
<td>9</td>
<td>549</td>
<td>2* Teaching</td>
</tr>
<tr>
<td>Teaching Assistantship (130:24-30)</td>
<td>8600-9300</td>
<td>9</td>
<td>549</td>
<td>4-5* Teaching</td>
</tr>
<tr>
<td>Research Assistantship (4-6:* *)</td>
<td>8600-9300</td>
<td>9</td>
<td>549</td>
<td>2-3* Research, teaching</td>
</tr>
<tr>
<td>Summer Teaching</td>
<td>2400-2500</td>
<td>1.5</td>
<td>80</td>
<td>10</td>
</tr>
<tr>
<td>Summer Fellowship (60-65:10-15)</td>
<td>2000-2500</td>
<td>2</td>
<td>80</td>
<td>Varies</td>
</tr>
</tbody>
</table>

Richard McGehee, Head

Graduate Students: full-time 170; full-time first year 41; part-time 149

**Not available to first year students.

### Mississippi

### University of Mississippi, University 38677

**Mathematics**

<table>
<thead>
<tr>
<th>Type of Assistance</th>
<th>Stipend</th>
<th>Fees</th>
<th>Service Required</th>
<th>Degrees Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fellowship (2-varies)</td>
<td>1200-2000</td>
<td>9</td>
<td></td>
<td>Ph. D. (84/87) AFA 2. Total: 2</td>
</tr>
<tr>
<td>Teaching Assistantship (12-8)</td>
<td>6400-7000</td>
<td>9</td>
<td>6*</td>
<td>Teaching</td>
</tr>
<tr>
<td>Research Assistantship (4-varies)</td>
<td>5000-6400</td>
<td>9</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

James F. Porter, Chairman

Graduate Students: full-time 17; full-time first year 4; part-time 4

1258
University of Southern Mississippi, Hattiesburg 39406

MATHEMATICS
Steve Doblin, Chair

Applications due: 3/15/88
Graduate Students: full-time 10; full-time first year 1; part-time 9

Teaching Assistantship (6-9:6-8) 6400-7100 9 1610 20 Grading, teaching
Tutor/Teaching Assistantship (*) 3.35-5/hr. 9 ** 5-20 Tutoring, grading
Part-Time Instructor (*) 1100-4400 9 ** 5-20 Teaching

*Several; **Several.
**In-state: $1610; out-of-state: $2792.

Missouri

Central Missouri State University, Warrensburg 64093

MATHEMATICS AND COMPUTER SCIENCE
Edward Davenport, Chair

Applications due: 3/1/88
Graduate Students: full-time 8; full-time first year 3; part-time 2

Teaching Fellowship (4:3) 2100-4200 9 Waived 3-6 Teaching

Northeast Missouri State University, Kirksville 63501

MATHEMATICS AND COMPUTER SCIENCE (Ad on p. 1260)
Lanny C. Morley, Head

Applications due: 3/15/88
Graduate Students: full-time 3; full-time first year 2; part-time 2

Teaching Assistantship (9.6) 8000 9 36 Teaching
Research Assistantship (4.2) 8000 9 10 Research

UNIVERSITY OF MINNESOTA
SCHOOL OF MATHEMATICS

The School of Mathematics offers programs leading to the M.S. and Ph.D. degrees. Our 80 full-time faculty members have wide-ranging interests covering most areas of mathematics. The school offers many advantages, including a faculty-student ratio of 1:2 and an excellent library. Teaching assistantships and fellowships are available.

The Institute for Mathematics and Its Applications, located in the same building as the School of Mathematics, invites graduate students to participate in its activities. Extensive opportunities also exist for interaction with various engineering, science, and social science departments.

A good transit system, beautiful parks and lakes, and friendly neighborhoods make the Twin Cities a great place to live.

For more information write to:
Professor Naresh Jain
School of Mathematics
127 Vincent Hall
206 Church St. S.E.
University of Minnesota
Minneapolis, MN 55455
Saint Louis University, St. Louis 63103

MATHMATICS AND COMPUTER SCIENCE
John Cantwell, Chair

Faculty 13; Published 8
Graduate Students: full-time 13; full-time first year 9; part-time 5
Teaching Assistantship (11:3) 5800 9 * 6 Ph. D. (84/87) ANT 1, CS 1.
*12 hours per year tuition remission.

Southeast Missouri State University, Cape Girardeau 63701

MATHEMATICS
Harold W. Hager, Chairman

Applications due: 3/1/88
Faculty 22; Published 5
Graduate Students: full-time 3; full-time first year 1; part-time 0
Teaching Assistantship (4:3) 4250 9 Waived 6

Southwest Missouri State University, Springfield 65804

MATHEMATICS
Simon J. Bernau, Chairman

Applications due: 6/88
Faculty 27; Published 11
Graduate Students: full-time 4; full-time first year 4; part-time 0
Teaching Assistantship (6:3) 4750-6000 9 20 Teaching

NORTHEAST MISSOURI STATE UNIVERSITY
THE LIBERAL ARTS AND SCIENCES INSTITUTION OF MISSOURI
Division of Mathematics and Computer Science
Graduate Studies in Pure and Applied Mathematics

DEGREE PROGRAMS: The Division offers a program of study leading to the Master of Arts degree with emphasis in either pure or applied mathematics. The program has, as its primary purpose and goal, the preparation of graduates who will be able to enter and excel either in strong mathematics Ph.D. programs or in professional careers demanding the abilities and qualities developed in a strong masters program. Organized around an extensive central core of tradition and contemporary areas of mathematics and a substantial emphasis area in pure or applied mathematics, the program is designed to insure breadth, depth, and a significant research experience.

FINANCIAL AID: Aid consists of graduate Research/Teaching assistantships with stipend of $8,000 per year. Responsibilities are 3 semester hour teaching load or equivalent research activity.

LOCATION: The university is located in a peaceful, rural area of northeast Missouri, approximately 150 miles from Kansas City and 200 miles from St. Louis. The Thousand Hills State Park is only about 3 miles away. Kirksville is a town of 18,000, home of the first college of osteopathic medicine, two modern, well-equipped hospitals, and several light industries.

APPLICATION: For additional information and application forms, write to:
Graduate Committee
Division of Mathematics and Computer Science
Northeast Missouri State University
Kirksville, MO 63501

To assure consideration for financial aid, applicants should submit all forms by March 15, 1988. International students should inquire early.

1260
<table>
<thead>
<tr>
<th>UNIVERSITY OF MISSOURI-COLUMBIA</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TYPE OF ASSISTANCE</strong></td>
<td><strong>STIPEND</strong></td>
<td><strong>FEES</strong></td>
<td><strong>SERVICE REQUIRED</strong></td>
<td><strong>DEGREES AWARDED</strong></td>
</tr>
<tr>
<td>(Total no. : no. anticipated)</td>
<td>paid to student</td>
<td>paid by</td>
<td>hours</td>
<td>Academic year</td>
</tr>
<tr>
<td></td>
<td>dollars</td>
<td>student ($)</td>
<td>type</td>
<td>1986-1987</td>
</tr>
<tr>
<td><strong>University of Missouri-Columbia 65211</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHMATICS</td>
<td>Faculty 34; Published 29</td>
<td>Graduate Students: full-time 31; full-time first year 16; part-time 0</td>
<td>Bachelor's by inst. 3494</td>
<td></td>
</tr>
<tr>
<td>Keith Schrader, Chair</td>
<td></td>
<td></td>
<td></td>
<td>Bachelor's by dept. 9</td>
</tr>
<tr>
<td>Fellowship (5*:5)</td>
<td>8000-9000</td>
<td>9</td>
<td></td>
<td>Master's by dept. 3</td>
</tr>
<tr>
<td>Teaching Assistantship (50:60)</td>
<td>8500-9500</td>
<td>9</td>
<td>6* Teaching</td>
<td>Ph. D. (84/87) ANT 1, AFA 1,</td>
</tr>
<tr>
<td>Research Assistantship (2:0)</td>
<td>3000-4000</td>
<td>9</td>
<td></td>
<td>GT 1. Total: 3</td>
</tr>
<tr>
<td>Scholarship (10*:10)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*University-wide.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>University of Missouri-Kansas City 64110</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHMATICS</td>
<td>Applications due: 4/15/88*</td>
<td>Faculty 14; Published 7</td>
<td>Bachelor's by inst. 1033</td>
<td></td>
</tr>
<tr>
<td>G. Phillip Barker, Chair</td>
<td></td>
<td>Graduate Students: full-time 14; full-time first year 7; part-time 8</td>
<td>Bachelor's by dept. 5</td>
<td></td>
</tr>
<tr>
<td>Fellowship (1:0)</td>
<td>7000</td>
<td>9</td>
<td></td>
<td>Master's by dept. 2</td>
</tr>
<tr>
<td>Teaching Assistantship (5:1)</td>
<td>8039-8348</td>
<td>9</td>
<td>56.25 6*</td>
<td>Ph. D. (84/87) AFA 2. Total: 2</td>
</tr>
<tr>
<td>*To be certain of consideration.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>University of Missouri-Rolla 65401</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENGINEERING MECHANICS</td>
<td>Applications due: Open</td>
<td>Faculty 13; Published 8</td>
<td>Bachelor's by inst. 1094</td>
<td></td>
</tr>
<tr>
<td>Peter G. Hansen, Chairman</td>
<td></td>
<td>Graduate Students: full-time 22; full-time first year 7; part-time 47</td>
<td>Bachelor's by dept. 9</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (12:4)</td>
<td>9000*</td>
<td>9</td>
<td>2200 20 Teaching</td>
<td>Master's by dept. 21</td>
</tr>
<tr>
<td>Research Assistantship (4:2)</td>
<td>9000*</td>
<td>9</td>
<td>2200 20 Research</td>
<td>Ph. D. (84/87) Other 2. Total: 2</td>
</tr>
<tr>
<td>*Half-time.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHMATICS AND STATISTICS</td>
<td>Applications due: 2/15/88</td>
<td>Faculty 22; Published 12</td>
<td>Bachelor's by inst. 1094</td>
<td></td>
</tr>
<tr>
<td>Glen Haddock, Acting Chairman</td>
<td></td>
<td>Graduate Students: full-time 29; full-time first year 8; part-time 0</td>
<td>Bachelor's by dept. 8</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (30:8)</td>
<td>9000</td>
<td>9</td>
<td>6-7* Teaching</td>
<td>Master's by dept. 9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Ph. D. (84/87) AFA 1, P 1, S 1.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total: 3</td>
</tr>
<tr>
<td><strong>Washington University, St. Louis 63130</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COMPUTER SCIENCE</td>
<td>Applications due: 2/15/88</td>
<td>Faculty 12; Published 8</td>
<td>Bachelor's by inst. 1355</td>
<td></td>
</tr>
<tr>
<td>Jerome R. Cox, Chairman</td>
<td></td>
<td>Graduate Students: full-time 89; full-time first year 13; part-time 14</td>
<td>Bachelor's by dept. 53</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (9:4)</td>
<td>8100-10350</td>
<td>9</td>
<td>20 Grading, consulting</td>
<td>Master's by dept. 21</td>
</tr>
<tr>
<td>Research Assistantship (20:4)</td>
<td>13500-17250</td>
<td>12</td>
<td>20* Research</td>
<td>Ph. D. (84/87) CS 2. Total: 2</td>
</tr>
<tr>
<td>*20 academic year, 40 summer.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**MS in Applied Mathematics MA and PhD in Mathematics**

The most comprehensive campus of the University is located midway between Saint Louis and Kansas City. Graduate Teaching Assistantships available to those admitted to the graduate program include waiver of tuition, payment of all fees, and a current stipend of $8500. Summer session support is additional. Women and minorities are encouraged to apply.

for information write: Dr. C.W. Morris, Associate Chair
201 Math Science Building
Columbia, MO 65211

an equal opportunity institution
GRADUATE MATHEMATICAL SCIENCES AT THE UNIVERSITY OF MONTANA

PH.D. PROGRAM. This program for the advanced training of college mathematics teachers and other mathematical "generalists" has been developed with aid of a grant from the Advanced Training Projects, NSF Division of Graduate Education. It emphasizes breadth of knowledge, skill in the communication of mathematical thought, an awareness of the influence of mathematics on modern society and intellectual life, and the development of a sense of vocation as teacher and scholar. The program provides the opportunity for both traditional and interdisciplinary thesis work and boasts of a one hundred percent success rate in placing its graduates in positions in 4-year colleges and universities. For details, please write for the "Ph.D. Packet".

INTERDISCIPLINARY APPLIED MATHEMATICS MASTERS PROGRAM. This new option in the M.A. program is intended to prepare students to undertake careers as applied mathematicians, knowledgeable and experienced in the mathematical modeling of scientific phenomena. The program is intended for students whose undergraduate degree is in science or mathematics. It includes an individually tailored course of study, emphasizing the process of modeling and its role in scientific inference, and including some practical experience in model building. The student may choose an emphasis in physical science, biological science, or economic theory and operational analysis. For details, please ask for the "Interdisciplinary Masters Packet". Write to:

Chairman, Graduate Committee — Mathematics Department, University of Montana, Missoula, MT 59812
**University of Nebraska-Lincoln 68588**

**MATHEMATICS AND STATISTICS**
David Logan, Chair

Applications due: Open*

Graduate Students: full-time 68; full-time first year 25; part-time -

Teaching Assistantship (45:20) 6800-7700 9 200 4-6*

*Open, but most decisions are made by April 1.

**University of Nebraska, Omaha 68182**

**MATHEMATICS AND COMPUTER SCIENCE**
John P. Maloney, Chairman

Applications due: 3/15/88

Graduate Students: full-time 4; full-time first year 2; part-time 55

Teaching Assistantship (4:2) 4700 9 Waived 20 Teaching

**University of Nevada, Reno 89557**

**MATHEMATICS** (Ad on p. 1264)
R. N. Tompson, Chairman

Applications due: 3/1/88

Graduate Students: full-time 19; full-time first year 5; part-time 4

Teaching Assistantship (5:3) 6500-7000 9 20 Teaching

**University of Nevada, Las Vegas 89154**

**MATHEMATICAL SCIENCES**
S. Verma, Chairman

Applications due: 3/1/88

Graduate Students: full-time 7; full-time first year 2; part-time -

Teaching Assistantship (2:--) 6800 9 7/8 20 Teaching

**New Hampshire**

**Dartmouth College, Hanover 03755**

**MATHEMATICS AND COMPUTER SCIENCE**
Richard H. Crowell, Chair

Applications due: 3/15/88

Graduate Students: full-time 29; full-time first year 12; part-time 0

Teaching Fellowship (28:28) 9300 12 4-10 Teaching

The Department. The department offers study in a broad range of areas including algebraic geometry, applied mathematics, commutative algebra, differential equations, modern analysis, operator theory, optimization, semigroups and statistics, leading to the M. S., M. A. T. and Ph. D. degrees. A joint Ph. D. program with computer science is also available.

Financial Aid. Stipends range from $680 to $840 per month for 4 to 6 contact hours. All assistantships include tuition waiver. Summer support is available and outstanding students may be considered for an additional fellowship stipend.

Location. Lincoln, the state capital, is a progressive community of 200,000 with an excellent cultural climate and modest cost of living. The University has 24,000 students and is located on an attractive campus adjacent to downtown.

For information write: Graduate Committee Chair, Department of Mathematics and Statistics, University of Nebraska-Lincoln, Lincoln, NE 68588-0323
New Jersey

Fairleigh Dickinson University, Teaneck 07606

MATHMATICS AND COMPUTER SCIENCE
Applications due: 3/15/88
Richard Bronson, Chairman
Faculty 18; Published 6
Graduate Students: full-time -; full-time first year -; part-time -

Fellowship (1:0) 3600-4800 9 20 Research
Teaching Fellowship (6:3) 3600-4800 9 6 Teaching

Glassboro State College, Glassboro 08028

MATHMATICS AND COMPUTER SCIENCE
Applications due: Open
F. E. Masat, Chairperson
Faculty 25; Published 4
Graduate Students: full-time 7; full-time first year 2; part-time -

Research Assistantship (2:2) 3300 12 10 Clerical

Montclair State College, Upper Montclair 07043

MATHMATICS AND COMPUTER SCIENCE
Applications due: 4/1/88
Kenneth C. Wolff, Chairman
Faculty 32; Published 5
Graduate Students: full-time 35; full-time first year 12; part-time -

Teaching Assistantship (7:-) 3000 9 15 Tutorial lab.

Princeton University, Princeton 08544

MATHMATICS
Applications due: 1/4/88
Arthur S. Wightman, Chairman
Faculty 48; Published 35
Graduate Students: full-time 50; full-time first year 12; part-time 0

Fellowship (27:28) 6000-15000 9-12 Teaching GT 7, L 1, AM 5. Total: 23

Teaching Assistantship (27:27) 8900-10600 10 20 GT 8, L 1, AM 2, Other 1.

Research Assistantship (30:30) 8500-8900 10 20 Total: 28

Rutgers University, New Brunswick 08903

MATHMATICS
Applications due: 3/1/88
Joseph D'Atri, Chairman
Faculty 92; Published 84
Graduate Students: full-time 82; full-time first year 23; part-time 41

Fellowship (16:* 6000-10000 9 200 Teaching GT 7, L 3, AM 5. Total: 23

Teaching Assistantship (57:* 8245-8445 9 200

Graduate Assistantship (12:* 8245-8445 9 200

*Figures not available at this time.

UNIVERSITY OF NEVADA - LAS VEGAS

Graduate study programs for a M. S. degree are offered with courses leading to specialization in the following areas: ALGEBRA, APPLIED STATISTICS, COMPUTER SCIENCE, DIFFERENTIAL EQUATIONS, FOUNDATIONS, FUNCTIONAL & NUMERICAL ANALYSIS, OPERATIONS RESEARCH, PROBABILITY THEORY, REAL & COMPLEX VARIABLES and TOPOLOGY. A few assistantships, $6,800 for the first year and $7,000 for the second year, are available.

Excellent computing facilities are available for research. The Department of Mathematics, through an active faculty, offers graduate students both an unusual amount of personal attention and a lively research atmosphere. A number of invigorating research seminars in various fields are held during each academic year. Application forms for admission to the Graduate College and for Assistantship may be obtained from the Chairman, Department of Mathematics, University of Nevada, Las Vegas, Nevada 89154. Applications are due 3/1/88. UNLV is AA/EOE.
Seton Hall University, South Orange 07079

MATHMATICS AND COMPUTER SCIENCE
John J. Saccoman, Chairman
Applications due: 5/20/88
Faculty 15; Published 8
Graduate Students: full-time 3; full-time first year 3; part-time 7

Teaching Fellowship (3-1) 4000 9 15 Teaching, tutoring

Trenton State College, Trenton 08650

MATHMATICS AND STATISTICS
Michael Iannone, Chairman
Applications due: 7/15/88
Faculty 16; Published 7
Graduate Students: full-time 1; full-time first year 1; part-time 23

Teaching Assistantship (1.5--) 3000 10 15 Tutoring, proctoring
*Most such positions are filled during April and May.
**Tutoring only.

New Mexico

Eastern New Mexico University, Portales 88130

MATHMATICAL SCIENCES
Ira T. Elder, Chairman
Applications due: 9/30/88
Faculty 9; Published 5
Graduate Students: full-time 15; full-time first year 9; part-time 0

Teaching Assistantship (9-5) 4750 9 1014 20 Teaching, grading

New Mexico Institute of Mining and Technology, Socorro 87801

COMPUTER SCIENCE
Carl J. Popp, Acting Chairman
Applications due: 3/15/88
Faculty 5; Published 5
Graduate Students: full-time 17; full-time first year 4; part-time 4

Teaching Assistantship (5-3) 6100-6500 9 179 20 Grading, teaching, research
Research Assistantship (1-3) 6000-6600 9 179
Memorial Award (1-3) 500 557-2177

MATHEMATICS
Allan Gutjahr, Chairman
Applications due: 3/30/88
Faculty 9; Published 8
Graduate Students: full-time 13; full-time first year 6; part-time 1

Teaching Assistantship (7-3:3-4) 6100-6300 9 20 Teaching, grading, tutoring
Research Assistantship (2-4:1-2) 6000-10000 9-12 20* Research
*40 in summer.

New Mexico State University, Las Cruces 88003

MATHMATICAL SCIENCES (Ad on p. 1266)
Carol L. Walker, Head
Applications due: 3/31/88
Faculty 33; Published 26
Graduate Students: full-time 34; full-time first year 6; part-time 12

Teaching Fellowship (5-7:0) 7612-10698 9 432-576 15-20 Teaching
Teaching Assistantship (22-24:3-6) 6812-7132 9 432 20 Teaching
Research Assistantship (1-3:0-3) Varies 9-12 432 20 Research

University of New Mexico, Albuquerque 87131

MATHMATICS AND STATISTICS
Richard J. Griego, Chair
Applications due: 3/31/88
Faculty 42; Published 29
Graduate Students: full-time 69; full-time first year 10; part-time 10

Teaching Assistantship (25-- ) 5800-6200 9 Waived 5* Ph. D. (84/87) ANT 2, AFA 3,
## New York

### City University of New York, Brooklyn College 11210

**MATHEMATICS**
- Faculty: 28; Published: 12
- Graduate Students: full-time 0; full-time first year 0; part-time 35

**George S. Shapiro, Chairman**

Other*: 7/hr. up to 15 Tutoring

*Possible positions as tutor in workshop.

### City University of New York, City College, New York 10031

**MATHEMATICS**
- Applications due: 5/1/88
- Fellowship (3-5)
  - 1000-2000
  - 9
  - 650-1600
  - 4
  - Grading, research

Teaching Assistantship (30:12)
- 4600-9200
- 9
- 650-1600
- 4-8
- Teaching

### City University of New York, Graduate Center, New York 10036

**MATHEMATICS**
- Applications due: 2/1/88
- Fellowship (12:3)
  - 2000-7000
  - 9
  - Varies
  - Varies
  - Varies
  - Teaching

Teaching Assistantship (30:5)
- 2000-11000
- 9
- Varies
- 3-8
- Teaching

Research Assistantship (14:3)
- 2000-7000
- 9
- Varies
- Varies
- Research

### NEW MEXICO STATE UNIVERSITY

**Research Interests and Ph.D. Dissertation Directions.**

**Areas of Emphasis for M.S.**

**Financial Support.** Teaching Assistantships available. Also support may be available for work in mathematical aspects of AI, including Computer Vision, Pattern Recognition, Neural Network Modeling.

Direct inquiries to: **Department of Mathematical Sciences, New Mexico State University, Las Cruces, NM 88003**

An Equal Employment Opportunity/Affirmative Action Employer
City University of New York, Queens College, New York 11367

MATHMATICS

Graduate Students: full-time 20; full-time first year 8; part-time 4

Teaching Assistantship (5:3) 3600-8000 9 2000-3300 6 Teaching

Clarkson University, Potsdam 13676

MATHMATICS AND COMPUTER SCIENCE

Graduate Students: full-time 27; full-time first year 2; part-time 10

Teaching Assistantship (15:6) 9500–12000 12 12 Other 3. Total: 8

Columbia University, New York 10027

MATHMATICS

Graduate Students: full-time 50; full-time first year 10; part-time 2

Fellowship (40:10)** 8500*** 9 9-12 Ph. D. (84/87) CS 1, AM 4, Other 3. Total: 8

Cornell University, Ithaca 14853

APPLIED MATHMATICS

Graduate Students: full-time 22; full-time first year 6; part-time 3

Teaching Fellowship (15:4–5) 7875–11000 9-12 Exempt 10* Teaching

Statistics

Applications due: 1/4/88

Teaching Fellowship (15:4–5) 7875–11000 9-12 Exempt 10* Teaching

Teaching Assistantship (5:3) 3600-8000 9 2000-3300 6 Teaching
<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND paid to student</th>
<th>FEES paid by student (§)</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Total no.: no. anticipated)</td>
<td>dollars</td>
<td>months</td>
<td>hours</td>
<td>type</td>
</tr>
</tbody>
</table>

**New York University, Courant Institute of Mathematical Sciences, New York 10012**

**COMPUTER SCIENCE**

Cathleen S. Morawetz, Director, Courant Institute
Ralph Grishman, Chairman, Computer Science

Graduate Students: full-time 84; full-time first year 41; part-time 259

**Fellowship (3:3)**

- 12400-14400
- 12

**Teaching Assistantship (28:12)**

- 12400
- 9
- 660
- Individual

**Research Assistantship (39:5)**

- 12400
- 9
- 660
- Individual

**MATHMATICS**

Cathleen S. Morawetz, Director, Courant Institute
Henry P. McKean, Chairman, Mathematics

Graduate Students: full-time 117; full-time first year 34; part-time 49

**Fellowship (8:4)**

- 12900-13100
- 12

**Teaching Assistantship (23:9)**

- 11100
- 9
- 460
- Teaching

**Research Assistantship (38:6)**

- 11100
- 9
- 460
- Individual

**Polytechnic University, Brooklyn 10314**

**MATHEMATICS**

Harry Hochstadt, Chairman

Graduate Students: full-time 6; full-time first year --; part-time 10

**Teaching Fellowship (4--)**

- 6100
- 9
- 4
- Teaching

**Rensselaer Polytechnic Institute, Troy 12180**

**COMPUTER SCIENCE**

Joseph E. Flaherty, Chairman

Graduate Students: full-time 80; full-time first year 40; part-time 60

**Fellowship (6:3)**

- 9590-10000
- 9

**Teaching Assistantship (32:16)**

- 7500-7900
- 9
- 20
- Grading, teaching

**Research Assistantship (20:4)**

- 7500-8000
- 9
- 20
- Research

**MATHEMATICAL SCIENCES**

Joseph G. Ecker, Chairman

Graduate Students: full-time 69; full-time first year 17; part-time 5

**Fellowship (3:3)**

- 15000
- 12
- 290

**Teaching Fellowship (1:1)**

- 15000
- 12
- 290

**Teaching Assistantship (29:14)**

- 8000-8500
- 9
- 290
- 20
- Teaching, grading

**Research Assistantship (9:4)**

- 8000-10000
- 9
- 290
- 20
- Research

**Scholarship (S)**

- 9
- Variable

**RENSSELAER POLYTECHNIC INSTITUTE**

The Department of Mathematical Sciences is awarding four special fellowships to exceptionally qualified entering doctoral students in applied mathematics.

Parsons Fellowships in Applied Mathematics
$15,000 per annum plus tuition

The department offers strong research programs in applied mathematics, including physical mathematics and modeling, nonlinear analysis, applied geometry, scientific computing, mathematical programming and optimization. All applications received by March 15, 1988 will be considered for these fellowships.

Professor J. G. Ecker, Chairman
Department of Mathematical Sciences
Rensselaer Polytechnic Institute
Troy, NY 12180
State University College at Brockport 14420

MATHEMATICS AND COMPUTER SCIENCE
Kazumi Nakano, Chairperson

Teaching Assistantship (3:3)
Applications due: 5/15/88
Graduate Students: full-time 15; full-time first year 8; part-time 30
Stipend: 3850 dollars
Fees: 9 months
Service: 125 hours
15 Tutoring

State University of New York at Albany 12222

MATHEMATICS AND STATISTICS
J. W. Jenkins, Chair

Fellowship (4:--)
Applications due: 4/1/88
Graduate Students: full-time 40; full-time first year 11; part-time 15
Stipend: 10000 dollars
Fees: 9
Service: 36
Ph. D. (84/87) ANT 2, AFA 2, GT 1, P 1, S 7. Total: 13

State University of New York at Binghamton 13901

MATHEMATICAL SCIENCES
David L. Hanson, Chairman

Fellowship (2:1)
Applications due: 3/15/88
Graduate Students: full-time 52; full-time first year 12; part-time 11
Stipend: 6700-8000 dollars
Fees: 9
Service: 619-904
Ph. D. (84/87) ANT 1, GT 3, S 2, CS 1. Total: 7

State University of New York at Buffalo 14214

MATHEMATICS
Lewis A. Coburn, Chairman

Teaching Assistantship (30:14)
Applications due: 3/15/88
Graduate Students: full-time 50; full-time first year 11; part-time 12
Stipend: 6500-7500 dollars
Fees: 9
Service: 190
Teaching

State University of New York at Buffalo 14261

STATISTICS
John Ho, Acting Chair

Teaching Assistantship (6:4)
Applications due: 3/15/88
Graduate Students: full-time 23; full-time first year 8; part-time 5
Stipend: 6195-6904 dollars
Fees: 9
Service: 35
10-20 Grading, teaching
Ph. D. (84/87) P 1, S 2. Total: 3

State University of New York at Stony Brook 11794

APPLIED MATHEMATICS AND STATISTICS
Alan Tucker, Chair

Fellowship (2:1)
Applications due: 3/1/88
Graduate Students: full-time 77; full-time first year 25; part-time 30
Stipend: 10000 dollars
Fees: 9
Service: 0-800 10-15 Grading, teaching
Ph. D. (84/87) ANT 4, AFA 6, GT 8. Total: 18

Irwin Kra, Chairman

Fellowship (4-6:3)
Applications due: Open
Graduate Students: full-time 62; full-time first year 15; part-time 39
Stipend: 9000-10500 dollars
Fees: 9
Service: 75-350 5 Teaching
Ph. D. (84/87) ANT 4, AFA 6, GT 8. Total: 18

SUMMARY

Total no. : no. anticipated
paid to student
paid by
hours
type

1986-1987

State University College at Brockport 14420
MATHEMATICS AND COMPUTER SCIENCE
Kazumi Nakano, Chairperson

Teaching Assistantship (3:3)
Applications due: 5/15/88
Graduate Students: full-time 15; full-time first year 8; part-time 30
Stipend: 3850 dollars
Fees: 9 months
Service: 125 hours
15 Tutoring

State University of New York at Albany 12222
MATHEMATICS AND STATISTICS
J. W. Jenkins, Chair

Fellowship (4:--)
Applications due: 4/1/88
Graduate Students: full-time 40; full-time first year 11; part-time 15
Stipend: 10000 dollars
Fees: 9
Service: 36
Ph. D. (84/87) ANT 2, AFA 2, GT 1, P 1, S 7. Total: 13

State University of New York at Binghamton 13901
MATHEMATICAL SCIENCES
David L. Hanson, Chairman

Fellowship (2:1)
Applications due: 3/15/88
Graduate Students: full-time 52; full-time first year 12; part-time 11
Stipend: 6700-8000 dollars
Fees: 9
Service: 619-904
Ph. D. (84/87) ANT 1, GT 3, S 2, CS 1. Total: 7

State University of New York at Buffalo 14214
MATHEMATICS
Lewis A. Coburn, Chairman

Teaching Assistantship (30:14)
Applications due: 3/15/88
Graduate Students: full-time 50; full-time first year 11; part-time 12
Stipend: 6500-7500 dollars
Fees: 9
Service: 190
Teaching

State University of New York at Buffalo 14261
STATISTICS
John Ho, Acting Chair

Teaching Assistantship (6:4)
Applications due: 3/15/88
Graduate Students: full-time 23; full-time first year 8; part-time 5
Stipend: 6195-6904 dollars
Fees: 9
Service: 35
10-20 Grading, teaching
Ph. D. (84/87) P 1, S 2. Total: 3

State University of New York at Stony Brook 11794
APPLIED MATHEMATICS AND STATISTICS
Alan Tucker, Chair

Fellowship (2:1)
Applications due: 3/1/88
Graduate Students: full-time 77; full-time first year 25; part-time 30
Stipend: 10000 dollars
Fees: 9
Service: 0-800 10-15 Grading, teaching
Ph. D. (84/87) ANT 4, AFA 6, GT 8. Total: 18

SUMMARY

Total no. : no. anticipated
paid to student
paid by
hours
type

1986-1987

1269
Syracuse University, Syracuse 13244

MATHEMATICS
L. J. Lardy, Chairman

Fellowship (2-4-2-4) 7040–7600 8.5 30 Graduate Students: full-time 76; full-time first year 22; part-time 3
Teaching Assistantship (70:20) 7250–9000 8.5–10.5 30 4–6 Teaching, grading
Summer Fellowship (16-8-10) 1000–1100 2

*Late applications considered.

University of Rochester, Rochester 14627

COMPUTER SCIENCE
James F. Allen, Chairman

Fellowship (6-4) 7200–7500 9 15–20 Grading
Teaching Assistantship (12-4) 7200–7500 9 15–20 Teaching
Research Assistantship (32-2) 7200–7500 9 15–20 Research

MATHEMATICS
Samuel Gilder, Chairman

Fellowship (37:10) 6500–9500 9* 193 3–6 Teaching
Teaching Assistantship (37:10) 6500 9* 193 3–6 Teaching
Tuition Waiver (3-3) 6000

STATISTICS
K. Ruben Gabriel, Chairman

Fellowship (1-1) 8500 9 * 7–15 Research, teaching
Teaching Assistantship (10-3) 4000–6000 9 * 7–15 Teaching
Research Assistantship (1-1) 6000 9 * 7–15 Research

*Partial or full tuition waivers may be granted.

North Carolina

Appalachian State University, Boone 28608

MATHEMATICAL SCIENCES
H. William Paul, Chairman

Teaching Assistantship (12-7) 4000–6000 9 424 20 Teaching

Department of Computer Science
University of Rochester
Rochester, NY 14627

The Computer Science Department at the University of Rochester was established in 1974 with the goal of establishing a research-oriented department of the first rank at a compact scale. Today our department is young, energetic, and interested primarily in graduate education and research. We present the many advantages of a first rate department in a manageable and congenial setting. We are a recent recipient of an NSF Coordinated Experimental Research grant, and as part of our associated five-year plan we have acquired a 128-node, M88000-based "Butterfly" multicomputer, a new building, and five new faculty. Our laboratory and workstation facilities are excellent; besides the new Butterfly, there is a network of SUNS, VAXen, Xerox Dandelions, Lisp machines and smaller Butterfly configurations, as well as a professional staff to maintain software and hardware.

The Department has enjoyed good fortune in having various funding sources, and to date no student has ever gone without full-year funding for financial reasons. There is no undergraduate major or professional master's program, allowing faculty more time to devote to their advisees and to research. This close-knit relationship between our faculty and students is further enhanced by scientific and social exchanges with other departments.

The Finger Lakes area has four seasons and there are plenty of facilities to engage in sports and activities for any season. Rochester also has a surprisingly rich and concentrated cultural life, including a resident Philharmonic, several theatre companies, and museums.

1270
The Department of Mathematics of Duke University offers courses and thesis direction leading to the degrees of Master of Arts, and Doctor of Philosophy. The Department and University offer fellowships, teaching assistantships, and research assistantships. There are 29 graduate faculty members representing many areas of mathematics, especially nonlinear partial differential equations and geometry. Excellent library facilities as well as office space are available in the mathematics building.

For further information write to:

Professor Stephen Venakides
Director of Graduate Studies, Department of Mathematics
Duke University
Durham, North Carolina 27706
The Department of Mathematics offers flexible programs of study leading to M.S. and Ph.D. degrees in pure and applied mathematics. A graduate faculty of more than 50 represents a wide variety of research interests with strengths in abstract algebra, linear algebra, analysis, functional analysis, differential equations, applied mathematics, numerical analysis, control theory, biomathematics, topology, mathematical physics, category theory and geometric programming. The Department has close ties with several other departments on the campus; namely, Computer Science, Operations Research, Physics, Statistics and several engineering departments.

N. C. State is located in Raleigh, capital of North Carolina and one of the vertices of the Research Triangle. Cultural, scholastic, and recreational opportunities abound.

Teaching and research assistantships and scholarships are available. Summer support is also possible. For detailed information concerning the Department admission and degree requirements, and financial assistance together with application forms write to:

PROFESSOR JOHN FRANKE -- Department of Mathematics -- Box 8205
North Carolina State University -- Raleigh, N. C. 27695-8205
<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Total no.: no. anticipated)</td>
<td>paid to student dollars</td>
<td>paid by student ($)</td>
<td>hours type</td>
</tr>
<tr>
<td>University of North Carolina at Charlotte 28223</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHEMATICS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joseph E. Quinn, Chairman</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (12:6)</td>
<td>7000</td>
<td>9</td>
<td>750*</td>
<td>20</td>
</tr>
<tr>
<td>University of North Carolina at Greensboro 27410</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHEMATICS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paul Duvall, Head</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (6:4)</td>
<td>4500-5000</td>
<td>9</td>
<td>980</td>
<td>6*</td>
</tr>
<tr>
<td>Wake Forest University, Winston-Salem 27109</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHEMATICS AND COMPUTER SCIENCE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marcellus E. Waddill, Chairman</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (3-5-2-4)</td>
<td>10050</td>
<td>9</td>
<td>7250</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (3-5-2-4)</td>
<td>13500-13700</td>
<td>9</td>
<td>7250</td>
<td>6-9</td>
</tr>
<tr>
<td>Scholarship (2-4-2)</td>
<td>7250</td>
<td>9</td>
<td>7250</td>
<td></td>
</tr>
<tr>
<td>Western Carolina University, Cullowhee 28723</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHEMATICS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charles J. Martin, Head</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (1:3)</td>
<td>4000*</td>
<td>9</td>
<td>444/sem.</td>
<td>3-6*</td>
</tr>
<tr>
<td>Service (5:6)</td>
<td>4000*</td>
<td>9</td>
<td>444/sem.</td>
<td>15</td>
</tr>
<tr>
<td>North Dakota</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>North Dakota State University, Fargo 58105</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHEMATICAL SCIENCES (Ad on p. 1274)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ronald M. Mathsen, Chair</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (~27)</td>
<td>5490-5850</td>
<td>9</td>
<td>20</td>
<td>Teaching</td>
</tr>
<tr>
<td>Research Assistantship (~5)</td>
<td>5400-5580</td>
<td>9</td>
<td>20</td>
<td>Research</td>
</tr>
</tbody>
</table>

**UNIVERSITY OF NORTH CAROLINA**

The Department of Mathematics offers programs leading to the degrees Master of Arts, Master of Science, and Doctor of Philosophy. Faculty members are active in research especially in the fields of classical analysis, algebra, combinatorics, differential geometry, dynamical systems, algebraic topology, foliation theory, algebraic geometry, several complex variables, numerical analysis, and partial differential equations. Financial assistance is available and can be obtained by writing to address below. There is great flexibility in arranging the masters degree program to include course work in Operations Research and Systems Analysis, Statistics, Computer Science and other areas related to mathematical sciences.

Department of Mathematics
University of North Carolina at Chapel Hill
Chapel Hill, N.C. 27514

Equal Opportunity/Affirmative Action Employer.
University of North Dakota, Grand Forks 58202

**MATHEMATICS**
Milton E. Winger, Chairperson  
Applications due: 4/15/88  
Faculty 22; Published 2  
Graduate Students: full-time 14; full-time first year 8; part-time 0  
Teaching Assistantship (8:5:5)  
6000  
9  
15 Grading, teaching

**BOWLING GREEN STATE UNIVERSITY, Bowling Green 43403**

**APPLIED STATISTICS AND OPERATIONS RESEARCH**  
James A. Sullivan, Chair  
Faculty 13; Published 7  
Graduate Students: full-time 23; full-time first year 10; part-time 1  
Teaching Assistantship (10-14:5-7)  
4414-6768  
9  
210  
10-20 Grading, teaching  
Statistical Consulting Center (1:1)  
4414-6768  
9  
20 Consulting

**MATHEMATICS AND STATISTICS**  
Hassoon Al-Amiri, Chair  
Faculty 34; Published 18  
Graduate Students: full-time 45; full-time first year 7; part-time 9  
Teaching Fellowship (15:-)  
7624-8236  
9  
400  
4 Research  
Teaching Assistantship (29:-)  
6768-6940  
9  
400  
3 Research  
Non-Service Fellowship (1:-)  
6000  
12  
400  
6 Research

**OHIO**

Ohio

Ohio State University, Columbus 43210  
Applications due: 1/4/88  
Faculty 54; Published 8  
Graduate Students: full-time 50; full-time first year 15; part-time 0  
Teaching Fellowship (12:5)  
1400-7406  
9  
360  
12 Grading, teaching  
Teaching Assistantship (9:-)  
7624-8236  
9  
400  
2 Consulting  
Teaching Assistantship (3:-)  
6768-6940  
9  
400  
2 Consulting  
Teaching Assistantship (1:-)  
6000  
12  
400  
2 Consulting

**NORTH DAKOTA STATE UNIVERSITY**

Graduate Studies in the Mathematical Sciences

The Computer Science/Operations Research Department offers the Ph.D. degree in computer science and in operations research as well as the M.S. degree in computer science. Faculty specialties include database systems, algorithm analysis, artificial intelligence, and software engineering with grants from the NSF and the AFOSR. Equipment includes Sun and Macintosh II workstations, a Hewlett-Packard 320, AT&T 3B2’s, IBM & Zenith PC’s, and robot and graphics labs. Substantial opportunities exist for local internships and other employment.

The Mathematics Department offers the M.S. and Ph.D. degrees in mathematics and the M.S. mathematics education. Faculty specialties include applied mathematics, homological algebra, number theory, differential equations, convex functions, ergodic theory, graph theory, matrix theory, approximation theory, and special relativity. Individual attention for graduate students is enhanced by small class sizes.

The Statistics Department offers the M.S. in applied statistics and the Ph.D. in statistics. Areas of active research interest include probability, inference, nonparametrics, linear models, multivariate analysis, time series, and biostatistics. Computing facilities including a VAX 11/780 and an IBM 3081 with standard statistical packages, close ties with other departments, and ample opportunities for statistical consulting enhance the program.

NDSU is in the Fargo-Moorhead metropolitan area of 140,000 with higher education a major business. The climate is conducive to Intellectual pursuits. Applications for assistantships received after the deadline will be considered on a position available basis. For more information write to the Director of Graduate Studies of the specific department, Fargo, ND 58105-5075. AA/EOE
<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Total no.: no. anticipated)</td>
<td>paid to student</td>
<td>paid by</td>
<td>hours</td>
<td>type</td>
</tr>
<tr>
<td></td>
<td>dollars</td>
<td>student ($)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Western Reserve University, Cleveland 44106</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EPIDEMIOLOGY AND BIOSTATISTICS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Applications due: 1/31/88</td>
<td></td>
<td></td>
<td>12/31</td>
<td></td>
</tr>
<tr>
<td>Graduate Students: full-time 8; full-time first year 3; part-time 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (5:2)</td>
<td>753-7524</td>
<td>9</td>
<td>9</td>
<td>Ph. D. (84/87) S 6. Total: 6</td>
</tr>
<tr>
<td>MATHMATICS AND STATISTICS</td>
<td>Applications due: 1/15/88</td>
<td>Faculty 24; Published 23</td>
<td>123</td>
<td>Teaching</td>
</tr>
<tr>
<td>Graduate Students: full-time 8; full-time first year 2; part-time 7</td>
<td>5850</td>
<td>9</td>
<td>123</td>
<td>20</td>
</tr>
<tr>
<td>Teaching Assistantship (7:-)</td>
<td>5850</td>
<td>9</td>
<td>123</td>
<td>Teaching</td>
</tr>
<tr>
<td>OPERATIONS RESEARCH</td>
<td>Applications due: 2/1/88</td>
<td>Faculty 10; Published 10</td>
<td>5850</td>
<td>PhD. (84/87) GT 2, P 2.</td>
</tr>
<tr>
<td>Graduate Students: full-time 34; full-time first year 12; part-time 32</td>
<td>Tuition Fellowship (5-3)</td>
<td>5000/yr.*</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>Graduate Assistantship (8:2)</td>
<td>1250/mo.*</td>
<td>9</td>
<td>750/mo.*</td>
<td>Grading</td>
</tr>
<tr>
<td>Research Assistantship (5:0)</td>
<td>1300-1600/mo.</td>
<td>12</td>
<td>750/mo.*</td>
<td>Research</td>
</tr>
<tr>
<td>*Tuition figures; 1988-89 figures not available.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cleveland State University, Cleveland 44115</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHMATICS</td>
<td>Applications due: 9/1/88</td>
<td>Faculty 27; Published 16</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>Graduate Students: full-time 4; full-time first year 2; part-time 10</td>
<td>Teaching Assistantship (2:2)</td>
<td>1910/qtr.</td>
<td>9</td>
<td>Tutoring, grading</td>
</tr>
<tr>
<td>John Carroll University, University Heights 44118</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHMATICS AND COMPUTER SCIENCE</td>
<td>Applications due: 3/15/88</td>
<td>Faculty 14; Published 4</td>
<td>9</td>
<td>20</td>
</tr>
<tr>
<td>Graduate Students: full-time 4; full-time first year 3; part-time 12</td>
<td>Teaching Assistantship (5:3)</td>
<td>5800</td>
<td>9</td>
<td>20</td>
</tr>
<tr>
<td>*Tutoring and grading; teaching is possible.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miami University, Oxford 45056</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHMATICS AND STATISTICS</td>
<td>Applications due: 3/1/88</td>
<td>Faculty 44; Published 30</td>
<td>9</td>
<td>566</td>
</tr>
<tr>
<td>Graduate Students: full-time 30; full-time first year 19; part-time 0</td>
<td>Teaching Assistantship (24:12)</td>
<td>7500</td>
<td>9</td>
<td>566</td>
</tr>
<tr>
<td>Summer Fellowship (24:-)</td>
<td>1000</td>
<td>9</td>
<td>566</td>
<td>18</td>
</tr>
<tr>
<td>Ohio State University, Columbus 43210</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHMATICS (Ad on p. 1276)</td>
<td>Faculty 99; Published 65</td>
<td>9</td>
<td>6847</td>
<td></td>
</tr>
<tr>
<td>Graduate Students: full-time 182; full-time first year 49; part-time 25</td>
<td>Joseph Ferrar, Chairman</td>
<td>90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (5:2)</td>
<td>9900</td>
<td>12</td>
<td>6847</td>
<td></td>
</tr>
<tr>
<td>Teaching Fellowship (4:10)</td>
<td>500-1000</td>
<td>9</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (175-1000)</td>
<td>7200-8100</td>
<td>9</td>
<td>5-6</td>
<td>Teaching</td>
</tr>
<tr>
<td>Research Assistantship (2:2-5)</td>
<td>7200-8100</td>
<td>9</td>
<td>20</td>
<td>Research</td>
</tr>
<tr>
<td>Summer Teaching</td>
<td>2100</td>
<td>3</td>
<td>5</td>
<td>Teaching</td>
</tr>
<tr>
<td>Assistantship (80:0)</td>
<td>1900</td>
<td>3</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Summer Fellowship (53:60)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STATISTICS</td>
<td>Applications due: 2/15/88</td>
<td>Faculty 21; Published 21</td>
<td>9</td>
<td>20</td>
</tr>
<tr>
<td>Graduate Students: full-time 102; full-time first year 49; part-time 6</td>
<td>Jagdish S. Rustagi, Chairman</td>
<td>6487</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (13-:)</td>
<td>800/mo.</td>
<td>12</td>
<td>6487</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (42:5)</td>
<td>800-875/mo.</td>
<td>9</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Research Assistantship (2:0)</td>
<td>800-875/mo.</td>
<td>9</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

1275
Ohio University, Athens 45701

MATHEMATICS
Shih-liang Wen, Chair

Graduate Students: full-time 135, full-time first year 34; part-time 3

Fellowship (4:1) 10000-12000 9 450 15 Teaching
Teaching Assistantship (32:12) 5000-8500 9 450 15 Teaching

University of Akron, Akron 44325

MATHEMATICAL SCIENCES
William H. Beyer, Chair

Teaching Assistantship (43:40) 5000* 9 20
Research Assistantship (5:10) 5000* 9 20 Research

University of Cincinnati, Cincinnati 45221

MATHEMATICAL SCIENCES
Charles W. Groetsch, Head

Graduate Students: full-time 51; full-time first year 21; part-time 6

Fellowship (2:2) 6400-7400 9 345
Teaching Fellowship (2:2) 7400-8400 9 345
Teaching Assistantship (25:14) 6400-7400 9 20 Teaching, grading
Research Assistantship (2:0) 6400-7400 9 20 Research
Tuition Scholarship (14:10) 9 345

THE OHIO STATE UNIVERSITY

Mathematics Graduate students at Ohio State may pursue several degree options: a broad program of Ph.D. studies offering specialization in nearly all branches of contemporary mathematics, both pure and applied; M.S. studies in pure and applied mathematics (a dual degree program with Computer Science, and a concentration in Actuarial Science are available); or a mathematics-content M.A. program designed for secondary level teachers of mathematics.

Successful applicants are invited to begin their studies at Ohio State in June, 1988, with Summer Fellowship support including a stipend of $1900. Academic year financial support is available in the form of Fellowships and Teaching Associateships with stipends from $800 to $900 per month in addition to all tuition and fees. Academic year Fellowships may be augmented by half a T.A. position for a stipend up to $14,500 per year the first year.

M.A. applicants may request a double teaching load for a double stipend. Summer support is also available for many continuing students.

Further information and application materials are available from:

James R. C. Leitzel

THE OHIO STATE UNIVERSITY
Department of Mathematics, 231 West 18th. Avenue
Columbus, Ohio 43210-1174
<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Total no.: no. anticipated)</td>
<td>paid to student dollars</td>
<td>paid by student ($)</td>
<td>hours</td>
<td>type</td>
</tr>
<tr>
<td></td>
<td>months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QUANTITATIVE ANALYSIS AND INFORMATION SYSTEMS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>James R. Evans, Head</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Students: full-time 40; full-time first year 10; part-time</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (3:3)</td>
<td>4000</td>
<td>9</td>
<td>20</td>
<td>Teaching</td>
</tr>
<tr>
<td>Research Assistantship (9:3)</td>
<td>6300</td>
<td>9</td>
<td>20</td>
<td>Research</td>
</tr>
<tr>
<td>University of Dayton, Dayton 45469</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHEMATICS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>John W. McCloskey, Chairman</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Students: full-time 7; full-time first year 5; part-time 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (6:3)</td>
<td>6000-6300</td>
<td>9</td>
<td>6*</td>
<td>Teaching</td>
</tr>
<tr>
<td>Research Assistantship (3:2)</td>
<td>6200-6500</td>
<td>9</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>University of Toledo, Toledo 43560</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHEMATICS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harvey Wolff, Chairman</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Students: full-time 29; full-time first year 16; part-time 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (26:10)</td>
<td>6550-7350</td>
<td>9</td>
<td>*</td>
<td>Teaching</td>
</tr>
</tbody>
</table>

*$238 (plus $184 for insurance).

**UNIVERSITY OF CINCINNATI**

**Degree Programs:** The department offers programs leading to the M.S., M.A.T., and Ph.D. degrees in a variety of areas. The Master's program is primarily intended to prepare students for employment as mathematicians and statisticians in business, industry or government. Ph.D. candidates can choose from a variety of faculty research interests including algebra, complex analysis, dynamical systems, functional analysis, numerical analysis, ordinary and partial differential equations, probability, statistics and topology.

**Financial Aid:** Both Fellowships and Teaching Assistantships are available to qualified students. The current level of support is $6,400 to $7,400 for 9 months. Tuition remission is included with all financial aid. It is anticipated that stipends will be raised for the 1988-89 academic year.

**A.J. Macintyre Teaching Fellowships:** Two teaching fellowships are available to outstanding new applicants and may be renewed for one year upon superior performance. The present stipend is $7,400 for 9 months and includes tuition remission and reduced teaching load.

**Summer Research Assistantships:** Continuing students with excellent records are considered for summer research assistantships that pay $1,000 for 2 months.

For more information contact: Professor David Minda, Graduate Program Director  
Department of Mathematical Sciences  
University of Cincinnati  
Cincinnati, OH 45221-0025
<table>
<thead>
<tr>
<th>Type of Assistance</th>
<th>Stipend</th>
<th>Fees</th>
<th>Service Required</th>
<th>Degrees Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching Assistantship (8:4)</td>
<td>5600-5700</td>
<td>9</td>
<td>18 Teaching, tutoring</td>
<td></td>
</tr>
</tbody>
</table>

*Late applications accepted.

Oklahoma State University, Stillwater 74078

Computing and Information Science

Applications due: 3/15/88

Fellowship (1:0)

11000

12

12

Ph. D. (84/87) ANT 2, AFA 1, ME 1. Total: 4

Teaching Assistantship (45:15)

7500–8500

9

6

Teaching

Research Assistantship (45:15)

5625–10200

9-12

20

Teaching, grading

Research

Statistics

Applications due: 4/15/88

Teaching Assistantship (12:5) | 7500–7700 | 9 | 860 | 20 Teaching, grading |

Research Assistantship (4:2) | 10000–10265 | 12 | 860 | 20 Research |

Information: Wayne Powell, Graduate Director, Department of Mathematics, Oklahoma State University, Stillwater, Oklahoma 74078-0613

OSU

Oklahoma State University

Department of Mathematics

Research Faculty: The Mathematics Department at Oklahoma State University has an active and growing research faculty. Areas of particular strength are algebra, analysis, mathematics education, number theory, and topology.

Master's Degrees: Master's degrees are offered in pure and applied mathematics. The applied program features a careful mix of mathematics, statistics, and computer science courses as well as a special course in industrial related problems.

Doctoral Degrees: An established doctoral program features two degrees, the PhD, for those who are interested in continuing in mathematical research, and the EdD, for those who want to specialize in college level instruction.

Special Features: An industrial internship program in the summer gives students the opportunity to gain real-life work experience. Financial aid is available in the form of research and teaching assistantships, fellowships, and fee waivers.

Information: Wayne Powell, Graduate Director, Department of Mathematics, Oklahoma State University, Stillwater, Oklahoma 74078-0613
| TYPE OF ASSISTANCE                  | STIPEND   | FEES       | SERVICE REQUIRED | DEGREES AWARDED |
|------------------------------------|-----------|------------|------------------|----------------
|                                    | (Total no. : no. anticipated) | paid to student dollars | paid by student ($) | hours | type | Academic year |
|                                    |           |            |                  |                |      |      | 1986-1987 |
| University of Oklahoma, Norman 73019 |           |            |                  |                |      |      |         |
| MATHMATICS                         |           |            |                  |                |      |      |         |
| S. Eliason, Chair                  |           |            |                  |                |      |      |         |
| Applications due: Open*            |           |            |                  |                |      |      |         |
| Faculty 33; Published 30           |           |            |                  |                |      |      |         |
| Graduate Students: full-time 48, full-time first year 16, part-time 0 |           |            |                  |                |      |      |         |
| Fellowship (1:1)                   | 1000      | 9          | 680              |                |      |      |         |
| Teaching Assistantship (33:6)      | 6900-7700 | 9          | 680              | 6'              | Grading, teaching |         |
| Research Assistantship (6:6)       | 6900-8200 | 9          | 680              | 19              | Research |         |
| *3/1/88 for international students. |           |            |                  |                |      |      |         |
| University of Tulsa, Tulsa 74104  |           |            |                  |                |      |      |         |
| MATHMATICAL AND COMPUTER SCIENCES  |           |            |                  |                |      |      |         |
| W. A. Coberly, Chairman            |           |            |                  |                |      |      |         |
| Applications due: 3/1/88            |           |            |                  |                |      |      |         |
| Faculty 17; Published 11           |           |            |                  |                |      |      |         |
| Graduate Students: full-time 21, full-time first year 6; part-time 29 |           |            |                  |                |      |      |         |
| Fellowship (1:1)                   | 5200      | Waived     | Grading, teaching |                |      |      |         |
| Teaching Fellowship (4:3)          | 5200      | Waived     | Grading, teaching |                |      |      |         |
| Teaching Assistantship (6:5)       | 5200      | Waived     | Grading, teaching |                |      |      |         |
| Research Assistantship (3:1)       | 5200      | Waived     | Research         |                |      |      |         |
| Industry Intern (3:2)              | 9500      | 5040       | Research         |                |      |      |         |

The University of Oklahoma
Graduate Studies in Mathematics

The Department has a vigorous and expanding research faculty. All the major mathematical disciplines are represented, with special strengths in Algebra, Applied Mathematics, Control Theory, Convexity, Differential Geometry and Topology.

**Pure Mathematics.** The Department offers both the M.A. and Ph.D. degrees.

**Mathematics Education.** The Department cooperates with the College of Education to offer both the M.A. and Ph.D. degrees in Mathematics Education.

**Applied Mathematics.** The Department offers the M.S. degree designed to allow the student to specialize in any of a broad range of applications, including, for example, computer-related mathematics, applied differential equations, and applied algebra.

**Financial Aid.** The Department offers Graduate Teaching Assistantships, Research Assistantships, Karcher Endowed Fellowships and Fee Waivers on a competitive basis.

**For Information Write:** William O. Ray
Director of Graduate Studies
Department of Mathematics
The University of Oklahoma
Norman, OK 73019

1279
OREGON STATE UNIVERSITY
M.A., M.S. and Ph.D. in Mathematics

Courses of study for the Ph.D. and M.S. degrees are available in all of the principal branches of mathematics: algebra, analysis, applied mathematics, geometry, probability, and topology. In addition, there is a program in mathematics education leading to an M.A. or an M.S. degree with a teaching emphasis, and a career program featuring an occupational internship leading to an M.A. or M.S. for students planning government or industrial careers in mathematics.

Teaching Assistantships $5979—$7085 plus tuition remission.

For application materials write:

Professor Harold Parks
Department of Mathematics
Oregon State University, Corvallis, OR 97331
<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND FEES SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Total no.: no. anticipated)</td>
<td>paid to student dollars</td>
<td>paid by student (months)</td>
</tr>
<tr>
<td><strong>Bucknell University, Lewisburg 17837</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MATHEMATICS</strong></td>
<td>Applications due: 3/1/88</td>
<td>Bachelor's by inst. 764</td>
</tr>
<tr>
<td>David S. Ray, Head</td>
<td>Faculty 18; Published 15</td>
<td>Bachelor's by dept. 32</td>
</tr>
<tr>
<td>Fellowship (2-5)</td>
<td>925</td>
<td>Master's by dept. 0</td>
</tr>
<tr>
<td>Teaching Assistantship (5-)</td>
<td>3000</td>
<td>9</td>
</tr>
<tr>
<td>Scholarship (3-)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Carnegie-Mellon University, Pittsburgh 15213</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MATHEMATICS</strong></td>
<td>Applications due: 2/19/88</td>
<td>Bachelor's by inst. 910</td>
</tr>
<tr>
<td>William O. Williams, Acting Head</td>
<td>Faculty 22; Published 18</td>
<td>Bachelor's by dept. 150</td>
</tr>
<tr>
<td>Teaching Assistantship (28.53)</td>
<td>9100-9900</td>
<td>Master's by dept. 14</td>
</tr>
<tr>
<td>Research Assistantship (6.5:0)</td>
<td>10800-11100</td>
<td>9</td>
</tr>
<tr>
<td><strong>STATISTICS</strong></td>
<td>Applications due: 3/15/88</td>
<td>Bachelor's by inst. 910</td>
</tr>
<tr>
<td>John P. Lehoczky, Head</td>
<td>Faculty 12; Published 12</td>
<td>Bachelor's by dept. 2</td>
</tr>
<tr>
<td>Teaching Fellowship (26.6)</td>
<td>6750</td>
<td>Master's by dept. 12</td>
</tr>
<tr>
<td>Teaching Assistantship (1-)</td>
<td>2700</td>
<td>9</td>
</tr>
<tr>
<td>Research Assistantship (2-3)</td>
<td>6552</td>
<td>12</td>
</tr>
<tr>
<td>Other (1-)</td>
<td>6000</td>
<td>9</td>
</tr>
<tr>
<td><strong>Drexel University, Philadelphia 19104</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MATHEMATICS AND COMPUTER SCIENCE</strong></td>
<td>Applications due: 3/15/88</td>
<td>Bachelor's by inst. 1200</td>
</tr>
<tr>
<td>Loren N. Argabright, Head</td>
<td>Faculty 38; Published 30</td>
<td>Bachelor's by dept. 90</td>
</tr>
<tr>
<td>Teaching Fellowship (40:18)</td>
<td>5200-6200</td>
<td>Master's by dept. 40</td>
</tr>
<tr>
<td>Research Assistantship (5:2)</td>
<td>5200-6200</td>
<td>Waived 8*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Waived 20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total: 4</td>
</tr>
<tr>
<td><strong>Lehigh University, Bethlehem 18015</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MATHEMATICS</strong></td>
<td>Applications due: 2/15/88</td>
<td>Bachelor's by inst. 1033</td>
</tr>
<tr>
<td>Eric P. Salathé, Chairman</td>
<td>Faculty 27; Published 25</td>
<td>Bachelor's by dept. 8</td>
</tr>
<tr>
<td>Fellowship (6-2)</td>
<td>5200-8000*</td>
<td>Master's by dept. 12</td>
</tr>
<tr>
<td>Teaching Assistantship (26:8)</td>
<td>7400-7900*</td>
<td>Research, course work</td>
</tr>
<tr>
<td>Research Assistantship (3-)</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>*1987-88 figures.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**THE UNIVERSITY OF OREGON**

Graduate Programs. The Department of Mathematics offers established programs leading to the M.S. and Ph.D. degrees in pure and applied mathematics, numerical analysis, mathematical statistics, and mathematics education.

Graduate classes are small and there is a tradition of personal contacts among faculty and students. Facilities include nearby computing services and a mathematics library housed adjacent to the offices.

Graduate Teaching Fellowships involve 4 contact hours per week, leaving time for carrying a full graduate program. Students find the cost of living in Eugene to be moderate and have access to ocean and mountain recreation areas a short distance away.

For further information and application materials write or telephone:

Frank W. Anderson, Head, Department of Mathematics
University of Oregon, Eugene, Oregon 97403
Phone (503) 686-4705

The University of Oregon is an Equal Employment/Affirmative Action Employer.
Pennsylvania State University, University Park 16802

COMPUTER SCIENCE
Joseph M. Lambert, Head
Applications due: 2/1/88
Faculty 32; Published 25
Graduate Students: full-time 104; full-time first year 23; part-time 29
Bachelor's by dept. 183
Master's by dept. 31
Ph. D. (84/87) CS 7. Total: 7

Additional support may be available in the summer session.

MATHMATICS
Richard Herman, Head
Applications due: 2/1/88
Faculty 46; Published 38
Graduate Students: full-time 95; full-time first year 32; part-time 3
Bachelor's by inst. 3051
Bachelor's by dept. 35
Master's by dept. 6
Ph. D. (84/87) ANT 9, AFA 1, L 7, AM 4. Total: 21

Temple University, Philadelphia 19122

MATHEMATICS
Louis Raymon, Chairman
Applications due: 3/1/88
Faculty 46; Published 38
Graduate Students: full-time 38; full-time first year 12; part-time 15
Bachelor's by inst. 3051
Bachelor's by dept. 35
Master's by dept. 6
Ph. D. (84/87) ANT 3, S 1, AM 1, Other 1. Total: 6

For more information about our MA and PhD programs in pure and applied mathematics,
write to Graduate Chairman, Box N, Department of Mathematics 038-15,
Temple University, Philadelphia, PA, 19122
<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Total no.: no. anticipated)</td>
<td>paid to student</td>
<td>paid by student</td>
<td>hours</td>
<td>type</td>
</tr>
<tr>
<td></td>
<td>dollars</td>
<td>months</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**STATISTICS**

D. Raghavarao, Chairman

| Fellowship (3:-) | 8000-12000 | 9 | 3400 | full-time 25, full-time first year 8; part-time 22 |
| Teaching Fellowship (2:-) | 8000 | 9 | 3400 | 20 |
| Teaching Assistantship (0:3) | 7000 | 9 | 3400 | 20 |
| Research Assistantship (13:5) | 4800-6000 | 9 | 3400 | 20 |

Applications due: 3/1/88

Graduate Students: Faculty 24; Published 17

| Bachelor's by inst. | 3051 |
| Master's by dept. | 10 |
| Ph. D. (84/87) S 10, OR 2, | |
| AM 1. Total: 13 |

**University of Pennsylvania, Philadelphia 19104**

**MATHEMATICS**

Frank W. Warner, Chairman

| Fellowship (13:10) | 9500 | 12 | * |
| Teaching Assistantship (38:10) | 6300-7350 | 9 | 7^c |
| Research Assistantship (1:-) | 7333 | 9 |

Applications due: 2/15/88

Graduate Students: Faculty 34; Published 30

| Bachelor's by dept. | 2000 |
| Master's by dept. | 4 |
| Ph. D. (84/87) ANT 2, AFA 3, | |
| Other 3. Total: 8 |

**Statistics**

David K. Hildebrand, Chairman

| Fellowship (1:-) | 10000 | 9 | Research |
| Teaching Assistantship (12:-) | 6300-7350 | 9 | 20 |
| Research Assistantship (1:-) | 7333 | 9 | Research |

Applications due: 2/29/88

Graduate Students: Faculty 15; Published 6

| Bachelor's by dept. | 2000 |
| Bachelor's by inst. | 0 |
| Ph. D. (84/87) S 4. Total: 4 |

**University of Pittsburgh, Pittsburgh 15261**

**Biostatistics**

Carol K. Redmond, Chairperson

| Fellowship (2:2) | 5200 |
| Teaching Assistantship (3:3) | 6300-9450 | 8 | 20 |
| Research Assistantship (23:23) | 7800-11125 | 8 | Waived |

Applications due: 3/15/88

Graduate Students: Faculty 21; Published 12

| Bachelor's by inst. | 1314 |
| Master's by dept. | 13 |
| Ph. D. (84/87) Other 9. Total: 9 |

**University of Pittsburgh, Pittsburgh 15260**

**Mathematics and Statistics**

Stuart Hastings, Chairman

| Teaching Fellowship (10:0) | 6650-9975 | 8-12 | Waived | 20 |
| Teaching Assistantship (38:20) | 6300-9450 | 8-12 | Waived | 20 |
| Research Assistantship (8:0) | 6500-10500 | 8-12 | Waived | 20 |
| Mellon Fellowship (3:0) | 7800-11125 | 8-12 | Waived |

Applications due: 3/15/88

Graduate Students: Faculty 44; Published 40

| Bachelor's by inst. | 1314 |
| Bachelor's by dept. | 67 |
| Master's by dept. | 23 |
| Ph. D. (84/87) AFA 1, GT 3, | |
| P 2, S 10, AM 2. Total: 18 |

**Villanova University, Villanova 19085**

**Graduate Computer Science**

Don Goelman, Director

| Research Assistantship (5:5) | 6000 | 9 | 20 |
| Tuition Waiver (4:2) | 9 | 10 |

Applications due: 3/15/88

Graduate Students: Faculty 13; Published 6

| Bachelor's by inst. | 2686 |
| Bachelor's by dept. | 72 |
| Master's by dept. | 101 |

**Mathematical Sciences**

Frederick W. Hartmann, Chairperson

| Teaching Assistantship (8:5) | 6000 | 9 | 3^c |
| Tuition Waiver (5:5) | 9 | 10 |

Applications due: 3/15/88

Graduate Students: Faculty 45; Published 14

| Bachelor's by inst. | 2686 |
| Bachelor's by dept. | 24 |
| Master's by dept. | 27 |

1283
<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Total no. : no. anticipated)</td>
<td>paid to student</td>
<td>paid by student</td>
<td>hours</td>
<td>type</td>
</tr>
<tr>
<td></td>
<td>dollars</td>
<td>months</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Puerto Rico

University of Puerto Rico, Mayaguez 00708

**MATHEMATICS**
- Applications due: 8/15/88
- Faculty 49; Published 9
- Graduate Students: full-time 13; full-time first year 4; part-time 7

- **Teaching Assistantship (30:15)** 4000-5250 10 100 6

**Brown University, Providence 02912**

**APPLIED MATHEMATICS**
- Applications due: 1/2/88
- Faculty 26; Published 26
- Graduate Students: full-time 72; full-time first year 22; part-time 2

<table>
<thead>
<tr>
<th>Fellowship (19:19)</th>
<th>7000-9000</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching Fellowship (1:1)</td>
<td>7800</td>
<td>9</td>
<td>Teaching</td>
</tr>
<tr>
<td>Teaching Assistantship (12:--)</td>
<td>7000-7400</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Research Assistantship (27:--)</td>
<td>7000-7400</td>
<td>9-12</td>
<td>10</td>
</tr>
</tbody>
</table>

**MATHEMATICS**
- Applications due: 1/1/88
- Faculty 24; Published 24
- Graduate Students: full-time 36; full-time first year 10; part-time 0

<table>
<thead>
<tr>
<th>Fellowship (-16)</th>
<th>3600-8000</th>
<th>9-12</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching Assistantship (-18)</td>
<td>3600-8000</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>Research Assistantship (-2)</td>
<td>3600-8000</td>
<td>9</td>
<td>4</td>
</tr>
</tbody>
</table>

**Rhode Island College, Providence 02908**

**MATHEMATICS AND COMPUTER SCIENCE**
- Applications due: 4/15/88
- Faculty 23; Published 10
- Graduate Students: full-time 4; full-time first year 0; part-time 15

- **Teaching Assistantship (2--)** 4000 9 20 *

*Three hours per week in-class teaching, plus preparation and 10 hours per week tutoring.*

### University of Rhode Island, Kingston 02881

**MATHEMATICS**
- Faculty 20; Published 16
- Graduate Students: full-time 17; full-time first year 7; part-time 15

- **Teaching Assistantship (17:5)** 6200-7000 9 500 20 Grading, teaching, tutoring

**South Carolina**

**Clemson University, Clemson 29634**

**MATHEMATICAL SCIENCES**
- Applications due: 2/15/88
- Faculty 44; Published 28
- Graduate Students: full-time 83; full-time first year 33; part-time 21

<table>
<thead>
<tr>
<th>Fellowship (9:5)</th>
<th>5000-12000</th>
<th>12</th>
<th>600</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching Assistantship (67:26)</td>
<td>6550-7250</td>
<td>9</td>
<td>600</td>
</tr>
<tr>
<td>Research Assistantship (8:5)</td>
<td>6550-8850</td>
<td>12</td>
<td>600</td>
</tr>
</tbody>
</table>

**University of Rhode Island, Kingston 02881**

**MATHEMATICS**
- Faculty 20; Published 16
- Graduate Students: full-time 17; full-time first year 7; part-time 15

- **Teaching Assistantship (17:5)** 6200-7000 9 500 20 Grading, teaching, tutoring

**South Carolina**

**Clemson University, Clemson 29634**

**MATHEMATICAL SCIENCES**
- Applications due: 2/15/88
- Faculty 44; Published 28
- Graduate Students: full-time 83; full-time first year 33; part-time 21

<table>
<thead>
<tr>
<th>Fellowship (9:5)</th>
<th>5000-12000</th>
<th>12</th>
<th>600</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching Assistantship (67:26)</td>
<td>6550-7250</td>
<td>9</td>
<td>600</td>
</tr>
<tr>
<td>Research Assistantship (8:5)</td>
<td>6550-8850</td>
<td>12</td>
<td>600</td>
</tr>
</tbody>
</table>
UNIVERSITY OF SOUTH CAROLINA
DEPARTMENT OF MATHEMATICS

The Department offers programs of study leading to the M.S., M.A., and Ph.D. degrees in Mathematics. In addition, there are two teaching-oriented nonthesis degrees — the Master of Mathematics and Master of Arts in Teaching.

Students may specialize in pure or applied mathematics. Specific areas of specialization in pure mathematics include algebra, analysis, differential geometry, discrete mathematics, logic, number theory and topology. Specialization in applied mathematics is offered in approximation theory, differential equations and numerical analysis. Students in applied mathematics are encouraged to undertake study in a cognate discipline to which their specialization is directly applicable.

The broad spectrum of advanced study is supported by excellent library holdings and computing facilities within the department.

FINANCIAL AID

The primary source of financial aid is the graduate assistantship. The Department offers teaching assistantships, grading assistantships, and service assistantships with the computing laboratory. In addition, a number of research assistantships are available through faculty grants. Full-time teaching assistantships typically require 3–5 contact hours per week and carry a stipend of $7500 to $8000 for the academic year. In addition, graduate assistants receive a substantial reduction in tuition and fees. Summer stipends range from $1200 to $2000, for those who desire summer support.

For further information and application materials, contact the Director of Graduate Studies, Department of Mathematics, University of South Carolina, Columbia, South Carolina 29208.
South Dakota School of Mines and Technology, Rapid City 57701

MATHEMATICS AND COMPUTER SCIENCE
Karen Whitehead, Head
Graduate Students: full-time 8; full-time first year 3; part-time -

Teaching Assistantship (1:1) 4800 9 6 Grading, teaching
*Tuition: $17 per credit hour, fees: $17.65 per credit hour.

South Dakota School of Mines and Technology, Rapid City 57701

University of South Dakota, Vermillion 57069

MATHEMATICAL SCIENCES
Alexander Mehaffey, Jr., Chair
Graduate Students: full-time 7; full-time first year 4; part-time 2

Teaching Assistantship (8:2-3) 4000 9 610 Teaching

Tennessee State University, Memphis 38152

MATHEMATICAL SCIENCES
Ralph Faudree, Chair
Graduate Students: full-time 55; full-time first year 20; part-time -

Teaching Assistantship (8:5) 4676-4922 9 6 Grading, teaching

Middle Tennessee State University, Murfreesboro 37132

MATHEMATICS
Harold S. Spraker, Chairman
Graduate Students: full-time 10; full-time first year 5; part-time -

Teaching Assistantship (8:5) 4676-4922 9 6 Grading, teaching

Tennessee Technological University, Cookeville 38505

MATHEMATICS
Alice Mason, Chairman
Graduate Students: full-time 10; full-time first year 5; part-time -

Teaching Assistantship (8:5) 4676-4922 9 6 Grading, teaching

University of Tennessee, Knoxville 37996

COMPUTER SCIENCE
J. H. Poore, Head
Graduate Students: full-time 120; full-time first year -; part-time -

Teaching Assistantship (21:8) 6552-7280 9 70 20 Teaching, grading

Mathematics
John S. Bradley, Head
Graduate Students: full-time 53; full-time first year 13; part-time 6

Teaching Fellowship (2:2) 10000 9*** 195 3-4 Teaching, grading
Teaching Assistantship (33:17) 7290-8740** 9*** 195 5 Grading, teaching
Research Assistantship (3:0) 11500 9*** 195 20 Research
Science Alliance Teaching Assistantship (12:0) 9720-11000** 9*** 195 3-5 Grading, teaching
Science Alliance Associateship (3:3) 11000-12000** 9*** 195 5 Grading, teaching

Ph. D. (84/87) AFA 1, GT 2, AM 2. Total: 5

1286
### Degrees Awarded

<table>
<thead>
<tr>
<th>Institution</th>
<th>Academic Year</th>
<th>Bachelor's by inst.</th>
<th>Bachelor's by dept.</th>
<th>Master's by dept.</th>
<th>Total:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vanderbilt University, Nashville 37235</td>
<td>1988-1987</td>
<td>3226</td>
<td>13</td>
<td>4</td>
<td>3393</td>
</tr>
<tr>
<td>Baylor University, Waco 76798</td>
<td>1987-1988</td>
<td>1245</td>
<td>46</td>
<td>7</td>
<td>1758</td>
</tr>
<tr>
<td>East Texas State University, Commerce 75428</td>
<td>1987-1988</td>
<td>1488</td>
<td>10</td>
<td>2</td>
<td>1610</td>
</tr>
<tr>
<td>Lamar University, Beaumont 77710</td>
<td>1988-1989</td>
<td>2400</td>
<td>14</td>
<td>11</td>
<td>3655</td>
</tr>
</tbody>
</table>

**Total: 7657**
The University: North Texas State University is located in Denton, Texas, a city of 60,000 residents just 35 miles north of the Dallas-Fort Worth metroplex and about 25 miles north of the DFW Airport. The North Central Texas climate is mild and the University's location offers many cultural, recreational, and economic opportunities to students. The University enrolls more than 22,000 students with one-fourth of these engaged in graduate study. The University has been designated an emerging national research university, and its name will become the University of North Texas, as approved by the state Legislature.

The Mathematics Library: The University maintains one of the nation's finest library collections in the mathematical sciences with more than 17,000 volumes. The library currently subscribes to 554 mathematics journals, has 388 complete runs, and 729 journal titles represented.

The Department: The Department offers programs of instruction and research leading to the Master of Arts, Master of Science and Doctor of Philosophy degrees. It is one of only a very few departments in the world which furnishes a research and an educational experience for its students in the "Texas Tradition," a discovery approach to learning and doing mathematics. The department has 20 faculty members and 60 teaching fellow positions. There are approximately 75 graduate students in mathematics.

Financial Assistance: Doctoral students may earn $1000 per month for 12 months by teaching two classes per semester and in the summer school. Students working on the master's degree may earn $850 per month. A class generally has 25-35 students. Out-of-state fees are waived for teaching fellows and spouses. The state pays the teaching fellows's share of social security (up to $965 per year). Texas has no state income tax. The University also awards ten duty-free doctoral fellowships of $10,000 each year.

Write for additional information and application forms.

Dr. John Ed Allen, Chairman
Department of Mathematics
North Texas State University
Denton, Texas 76203

EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER
<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
<th>Academic year</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Total no. : no. anticipated)</td>
<td>paid to student</td>
<td>paid by</td>
<td>hours</td>
<td>type</td>
<td></td>
</tr>
<tr>
<td></td>
<td>dollars</td>
<td>months</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Rice University, Houston 77251**

**MATHEMATICAL SCIENCES**

C.-C. Wang, Chairman

<table>
<thead>
<tr>
<th>Fellowship (11:5)</th>
<th>7000</th>
<th>9</th>
<th>4900</th>
<th>10</th>
<th>Grading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Assistantship (12:0)</td>
<td>7000</td>
<td>9</td>
<td>4900</td>
<td>10</td>
<td>Research</td>
</tr>
</tbody>
</table>

**MATHEMATICS**

Reese Harvey, Chairman

| Fellowship (13:4-5) | 8000–10000 | 9 | 600 | 3-5 | Grading, teaching |

**Southern Methodist University, Dallas 75275**

**MATHEMATICS**

Richard Haberman, Chairman

| Teaching Assistantship (15:7) | 6250–9250 | 9 | 3rd | Teaching |
| Research Assistantship (1:0) | 10750 | 12 | 40 | Research |
| Dean's Teaching Assistantship (3:3) | 8250–15000 | 9-12 | 3rd | Teaching |

**STATISTICAL SCIENCE**

U. Narayan Bhat, Chairman

| Teaching Assistantship (16:5) | 6750–10000 | 9 | 10 | Grading, teaching |

**Stephen F. Austin State University, Nacogdoches 75962**

**MATHEMATICS AND STATISTICS**

T. A. Atchison, Chairman

| Teaching Assistantship (10:5) | 4725 | 9 | 6 | Teaching |

*Late applications considered.*

**SOUTHERN METHODIST UNIVERSITY**

Dallas, Texas

M.S. and Ph. D. — In Applied Mathematics, Numerical Analysis, and Scientific Computation

Particular strengths of the department include ordinary and partial differential equations, mathematical modeling, biomedical systems, asymptotic and perturbation methods, nonlinear waves, solitons, and various areas of numerical analysis such as mathematical software for ordinary differential equations, numerical bifurcation, numerical linear algebra, parameter estimation and identification, composite meshes and free-surface fluid problems. Courses are also available in the departments of Computer Science, Operations Research, and Statistics.

Teaching assistantships are available, requiring the equivalent of one course per semester. The stipend for 1988-89 will be $6,250–$9,250 a year with the waiver of tuition and fees.

Outstanding prospects are eligible for a Deans's Award, $5,000 additional per academic year and a $3,750 summer research support. This results in a total stipend of $15,000.

For more information call (214) 692-2506 or write:

Graduate Director – Department of Mathematics – Southern Methodist University – Dallas, Texas 75275

1289
<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Total no.: no. anticipated)</td>
<td>paid to student</td>
<td>paid by student ($)</td>
<td>hours</td>
<td>type</td>
</tr>
<tr>
<td><strong>Texas A&amp;M University, College Station 77843</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MATHEMATICS</strong></td>
<td>Applications due: 2/1/88*</td>
<td>Bachelor's by inst. 6139</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H. E. Lacey, Head</td>
<td>Faculty 71; Published 65</td>
<td>Bachelor's by dept. 21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minor Fellowship (65:45)**</td>
<td>10000</td>
<td>Graduate Students: full-time 69; full-time first year 23; part-time 20 Teaching</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Departmental Fellowship (10:12)</td>
<td>4800-9600</td>
<td>12</td>
<td>750</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (50:20)</td>
<td>9000-12000</td>
<td>12</td>
<td>750</td>
<td>Teaching</td>
</tr>
<tr>
<td>Research Grants (3:4)</td>
<td>9984-11400</td>
<td>12</td>
<td>750</td>
<td></td>
</tr>
<tr>
<td>Assistant Lecturer (11:9)</td>
<td>9450-15000</td>
<td>12</td>
<td>750</td>
<td>Teaching</td>
</tr>
<tr>
<td>*First round offers.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>STATISTICS</strong></td>
<td>Applications due: 5/15/88</td>
<td>Bachelor's by inst. 6139</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raymond J. Carrol, Chairman</td>
<td>Faculty 18; Published 18</td>
<td>Bachelor's by dept. 12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minor Fellowship (65:45)</td>
<td>10000</td>
<td>Graduate Students: full-time 35; full-time first year 11; part-time 11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Departmental Fellowship (3:5)</td>
<td>9000-9600</td>
<td>12</td>
<td>750</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (25:15)</td>
<td>9000-9600</td>
<td>12</td>
<td>750</td>
<td>Teaching</td>
</tr>
<tr>
<td>Research Assistantship (3:3)</td>
<td>10800</td>
<td>12</td>
<td>750</td>
<td>Research</td>
</tr>
<tr>
<td>Assistant Research Statistician (1:1)</td>
<td>15420</td>
<td></td>
<td>750</td>
<td>Consulting</td>
</tr>
<tr>
<td>Assistant Lecturer (6:6)</td>
<td>12900</td>
<td></td>
<td>750</td>
<td>Teaching</td>
</tr>
<tr>
<td><strong>Texas Tech University, Lubbock 79409</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MATHEMATICS</strong> (Ad on p. 1292)</td>
<td>Applications due: 4/15/88</td>
<td>Bachelor's by dept. 24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clyde F. Martin, Chairman</td>
<td>Faculty 43; Published 38</td>
<td>Bachelor's by dept. 25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (54:15--20)</td>
<td>6650-7150</td>
<td></td>
<td>500</td>
<td>Teaching</td>
</tr>
<tr>
<td>Research Assistantship (3:2)</td>
<td>6650-7150</td>
<td></td>
<td>500</td>
<td>Research</td>
</tr>
<tr>
<td><strong>University of Houston--University Park, Houston 77004</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MATHEMATICS</strong></td>
<td>Applications due: 2/1/88*</td>
<td>Bachelor's by inst. 4700</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garret J. Etgen, Chairman</td>
<td>Faculty 42; Published 34</td>
<td>Bachelor's by dept. 22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Fellowship (35:15)</td>
<td>6600-7300</td>
<td></td>
<td>720</td>
<td>Teaching</td>
</tr>
<tr>
<td>Research Assistantship (2:2)</td>
<td>6600-7300</td>
<td></td>
<td>720</td>
<td>Research</td>
</tr>
<tr>
<td>Instructorship (2:--)</td>
<td>12000</td>
<td></td>
<td>720</td>
<td>Teaching</td>
</tr>
<tr>
<td>*Late applications considered if positions available.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>University of Texas at Austin 78712</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MATHEMATICS</strong> (Ad on p. 1292)</td>
<td>Applications due: 2/1/88*</td>
<td>Bachelor's by inst. 6751</td>
<td></td>
<td></td>
</tr>
<tr>
<td>John D. Dollard, Chairman</td>
<td>Faculty 63; Published 35</td>
<td>Bachelor's by dept. 72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Fellowship (2:2)</td>
<td>10500</td>
<td></td>
<td>630</td>
<td>**</td>
</tr>
<tr>
<td>Teaching Assistantship (86:20)</td>
<td>6500-9000</td>
<td></td>
<td>630</td>
<td>***</td>
</tr>
<tr>
<td>Research Assistantship (5--;)</td>
<td>5500-9711</td>
<td></td>
<td>630</td>
<td>Research</td>
</tr>
<tr>
<td>*For full consideration.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>University of Texas at El Paso 79968</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MATHEMATICAL SCIENCES</strong></td>
<td>Applications due: 4/15/88</td>
<td>Bachelor's by inst. 1311</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Les Foged, Chairman</td>
<td>Faculty 26; Published 8</td>
<td>Bachelor's by dept. 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (15:5)</td>
<td>6000</td>
<td></td>
<td>500</td>
<td>Grading, teaching</td>
</tr>
</tbody>
</table>

1290
Graduate Studies

The Department of Mathematics offers graduate studies leading to the M.S. and Ph.D degrees in mathematics. Graduate students in mathematics can design their programs from a diverse set of courses in the following areas: algebra, analysis, applied mathematics, functional analysis, mathematical physics, probability, and topology.

The main areas of research strength in the department are in Modern Analysis. Specifically, there is a very strong interactive research group in the areas of approximation theory, functional analysis, and probability theory, including a Center for Approximation Theory. In geometrical analysis the areas of strength include geometric measure theory, several complex variables, and mathematical physics.

Recent additions in control theory and solid mechanics enhance an active research group in applied mathematics, which also includes researchers in partial differential equations and integral equations. The Department has joint faculty appointments and/or joint research projects with several departments in the College of Engineering including: Aerospace, Electrical, Mechanical, and Nuclear Engineering. Inter-disciplinary research and degree programs are possible in these and other areas.

Financial Aid

Financial assistance is available on a competitive basis to all qualified applicants in the form of Graduate Assistantships awarded by the Department. Current stipends range from $750 to $1000 per month and are usually awarded for a 12 month period. Preference for Assistantships is given to those who complete their applications by February 1, 1988.

In addition, University and Regents' Fellowships are available on a competitive basis to highly qualified applicants. Individuals who wish to be considered for Fellowships should have their applications completed by February 1, 1988.

Most advanced graduate students are supported as Assistant Lecturers with stipends ranging from $900 to $1030 per month for half-time appointments.

For additional information, address inquiries to:

Chairman, Graduate Studies Committee
Department of Mathematics
Texas A&M University
College Station, Texas 77843-3368
**University of Texas at San Antonio 78285**

**MATHEMATICS, COMPUTER SCIENCE AND SYSTEMS DESIGN**

Jerome P. Keating, Acting Division Director

Graduate Students: full-time; first year 18285
part-time -

Teaching Assistantship (5-)

<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Total no.: no. anticipated)</td>
<td>paid to student</td>
<td>paid by student ($)</td>
<td>hours</td>
<td>type</td>
</tr>
<tr>
<td></td>
<td>dollars</td>
<td>months</td>
<td>type</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8000-8450</td>
<td>9</td>
<td>359*</td>
<td>10-20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Applications due: 12/1/87 | Bachelor’s by dept. 37 |
| Faculty 22; Published 11 | Master’s by dept. 0 |

*For Texas resident.

---

**TEXAS TECH UNIVERSITY - GRADUATE STUDY IN MATHEMATICS AND STATISTICS**

The University: Texas Tech University is located in Lubbock, Texas, a city of 200,000. Lubbock is in the South Plains of West Texas at an altitude of 3,250 feet. Dry, crisp air and sunny days throughout practically the entire year provide a healthful and invigorating climate. Texas Tech University is a multipurpose university and offers graduate work in most areas. A School of Medicine and a School of Law are housed on campus. Since 1952, approximately 1,650 doctorates have been awarded. The university enrolls 23,500 students with 3,200 graduate students.

The Department: The department offers graduate study in a broad range of areas, including applied mathematics, probability and statistics, analysis, algebra and topology leading to the M.S. and Ph.D. degrees. A special M.S. degree with emphasis in computer science and a M.A. degree designed for pre-college teachers are also offered.

The department has 47 faculty members and 57 supported teaching assistants. Active research is carried out in such areas as pattern recognition and video tracking, flow in porous media, three-dimensional seismic interpretation, wave propagation, transport theory, numerical analysis, nonlinear systems and control theory, several complex variables, statistics, topology, partial differential equations, geometric function theory, recursive function theory, and theoretical computer science. Seventy-five Ph.D.’s have been awarded by the department since 1967.

Financial Aid: Teaching assistant stipends for the academic year 1987-88 are expected to range from $6650-$7150. Summer support is usually available for those who want it. The State of Texas pays most of the employee's share of social security. Out-of-state tuition is waived for teaching assistants; the cost of tuition and fees is approximately $250 per semester.

Contact:

W. Gustafson, Graduate Advisor
Department of Mathematics
Texas Tech University
Lubbock, Texas 79409

---

**THE UNIVERSITY OF TEXAS AT AUSTIN**

**Dodd Teaching Fellowship**

Several Dodd Teaching Fellowships are available each year to graduate students new to UT Austin. They are renewable for one year upon (expected) superior performance. The stipend will be $10,500 for nine months beginning in September 1988; tuition is low but will not be waived. In addition to the large stipend, teaching duties are reduced compared to those of a standard teaching assistantship.

For further information and application materials write to:

Graduate Student Selection Committee
Mathematics Department
The University of Texas
Austin, Texas 78712

---

1292
<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>paid to student</td>
<td>paid by student ($)</td>
<td>hours</td>
<td>type</td>
</tr>
<tr>
<td></td>
<td>dollars</td>
<td>months</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>West Texas State University, Canyon 79016</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHEMATICS AND PHYSICAL SCIENCES</td>
<td>Faculty 5; Published 2</td>
<td>Graduate Students: full-time 8; full-time first year 4; part-time 4</td>
<td>Bachelor's by inst. 964</td>
<td></td>
</tr>
<tr>
<td>Vaughn Nelson, Head</td>
<td></td>
<td></td>
<td>Bachelor's by dept. 6</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (8:4)</td>
<td>4800</td>
<td>9</td>
<td>*</td>
<td>12</td>
</tr>
<tr>
<td>*Resident: $574; nonresident: $2446.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Utah**

**Brigham Young University, Provo 84602**

<table>
<thead>
<tr>
<th>MATHEMATICS</th>
<th>Applications due: 3/15/88</th>
<th>Bachelor's by inst. 6290</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peter L. Crawley, Chairman</td>
<td>Faculty 40; Published 20</td>
<td>Bachelor's by dept. 70</td>
</tr>
<tr>
<td>Fellowship (1:varies)</td>
<td>12300</td>
<td>Research</td>
</tr>
<tr>
<td>Teaching Fellowship (12:4)</td>
<td>7500-9500</td>
<td>9</td>
</tr>
<tr>
<td>Teaching Assistantship (20:12-15)</td>
<td>3500-7000</td>
<td>8</td>
</tr>
<tr>
<td>Scholarship (6:10:6-10)</td>
<td>1880-2820</td>
<td>8</td>
</tr>
<tr>
<td><strong>STATISTICS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leland J. Hendrix, Chairman</td>
<td>Faculty 15; Published 13</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (4:2)</td>
<td>7200-8000</td>
<td>12</td>
</tr>
<tr>
<td>Research Assistantship (4:2)</td>
<td>7200-10000</td>
<td>12</td>
</tr>
</tbody>
</table>

**University of Utah, Salt Lake City 84112**

<table>
<thead>
<tr>
<th>MATHEMATICS</th>
<th>Applications due: 3/15/88</th>
<th>Bachelor's by inst. 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>T. Benny Rushing, Chairman</td>
<td>Faculty 53; Published 40</td>
<td></td>
</tr>
<tr>
<td>Teaching Fellowship (33:--)</td>
<td>9500-11000</td>
<td>9</td>
</tr>
<tr>
<td>Teaching Assistantship (19:--)</td>
<td>9000</td>
<td>9</td>
</tr>
</tbody>
</table>

**Utah State University, Logan 84322**

<table>
<thead>
<tr>
<th>MATHEMATICS</th>
<th>Applications due: 4/1/88</th>
<th>Bachelor's by inst. 1508</th>
</tr>
</thead>
<tbody>
<tr>
<td>L. D. Loveland, Head</td>
<td>Faculty 51; Published 21</td>
<td>Bachelor's by dept. 14</td>
</tr>
<tr>
<td>Fellowship (2:2)</td>
<td>500-1000</td>
<td>9</td>
</tr>
<tr>
<td>Teaching Fellowship (3:3)</td>
<td>8500-9000</td>
<td>9</td>
</tr>
<tr>
<td>Teaching Assistantship (10:10)</td>
<td>7500-8000</td>
<td>9</td>
</tr>
<tr>
<td>Research Assistantship (2:1)</td>
<td>7500-9000</td>
<td>9</td>
</tr>
<tr>
<td>Grading Assistantship (9:9)</td>
<td>3750-4500</td>
<td>9</td>
</tr>
</tbody>
</table>

---

**Brigham Young University**

M.A., M.S., and Ph.D.

The mathematics faculty consists of 45 members, whose diverse interests are reflected in the selection of graduate courses offered each semester. Current research areas include: Algebraic Geometry, Combinatorial Group Theory, Geometric Topology, Group Theory, Linear Algebra, Number Theory, and Partial Differential Equations.

Brigham Young University is located in Provo, Utah, 45 miles south of Salt Lake City. The community offers pleasant living conditions with scenic surroundings and marvelous opportunities for skiing, hiking, and other activities.

Teaching assistantships: $7,000-$10,000. Tuition scholarships are also available.

For more information call (801)378-2062 or write: Graduate Coordinator, Department of Mathematics, 292 TMCB, Brigham Young University, Provo, Utah 84602
<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Total no.: no. anticipated)</td>
<td>paid to student</td>
<td>paid by</td>
<td>hours</td>
<td>type</td>
</tr>
<tr>
<td></td>
<td>dollars</td>
<td>student ($)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>University of Vermont, Burlington 05405</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHEMATICS AND STATISTICS</td>
<td>Applications due: 3/1/88</td>
<td>Bachelor’s by inst. 1675</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Donald E. Moser, Chairman</td>
<td>Bachelor’s by dept. 85</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty 26; Published 16</td>
<td>Master’s by dept. 11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Students: full-time 8; full-time first year 4; part-time 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Fellowship (14:8)</td>
<td>7000-7300</td>
<td>9</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td><strong>Virginia</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College of William and Mary, Williamsburg 23185</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COMPUTER SCIENCE</td>
<td>Applications due: 3/1/88</td>
<td>Bachelor’s by inst. 890</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Richard H. Prost, Chair</td>
<td>Bachelor’s by dept. 50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty 15; Published 12</td>
<td>Master’s by dept. 15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Students: full-time 32; full-time first year 15; part-time 38</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (14:7)</td>
<td>9750</td>
<td>12</td>
<td>2750</td>
<td>20</td>
</tr>
<tr>
<td>MATHEMATICS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>David Stanford, Chairman</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty 12; Published 7</td>
<td>Bachelor’s by inst. 890</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Students: full-time 11; full-time first year 8; part-time 2</td>
<td>Bachelor’s by dept. 38</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Fellowship (1:--)</td>
<td>3800</td>
<td>9</td>
<td>2750</td>
<td>5</td>
</tr>
<tr>
<td>Teaching Assistantship (4:3)</td>
<td>8050</td>
<td>9</td>
<td>2750</td>
<td>10</td>
</tr>
<tr>
<td><strong>James Madison University, Harrisonburg 22807</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHEMATICS AND COMPUTER SCIENCE</td>
<td>Applications due: 4/30/88*</td>
<td>Bachelor’s by inst. 1932</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diane M. Spresser, Head</td>
<td>Bachelor’s by dept. 76</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty 29; Published 14</td>
<td>Master’s by dept. 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Students: full-time 6; full-time first year 1; part-time 8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (6:4)</td>
<td>6000</td>
<td>9</td>
<td>15</td>
<td>Teaching or lab assistants</td>
</tr>
<tr>
<td>*To receive priority.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Old Dominion University, Norfolk 23508</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHEMATICS AND STATISTICS</td>
<td>Applications due: 5/1/88</td>
<td>Bachelor’s by inst. 1793</td>
<td></td>
<td></td>
</tr>
<tr>
<td>John Tweed, Chairman</td>
<td>Bachelor’s by dept. 17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty 29; Published 21</td>
<td>Master’s by dept. 9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Students: full-time 37; full-time first year 11; part-time 13</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (5:2)</td>
<td>10000-12000</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (19:5)</td>
<td>6000-8000</td>
<td>10</td>
<td>20</td>
<td>Teaching, grading</td>
</tr>
<tr>
<td>Research Assistantship (2:1)</td>
<td>6000-8000</td>
<td>10</td>
<td>20</td>
<td>Research</td>
</tr>
<tr>
<td>Summer Teaching/Research (10:-)</td>
<td>2000</td>
<td></td>
<td></td>
<td>Teaching or research</td>
</tr>
</tbody>
</table>

**THE DEPARTMENT OF MATHEMATICS AND STATISTICS**

**OLD DOMINION UNIVERSITY**

offers M.S. and Ph.D. programs in COMPUTATIONAL AND APPLIED MATHEMATICS. Emphasis areas include analytical and computational methods, numerical analysis, statistics, modeling, and applications (oceanography, fluid and solid mechanics, combustion, magnetohydrodynamics, mathematical biology, economics and operations research).

ODU is a public, state-supported institution located in Norfolk, VA, heart of the historic Tidewater region. Scientific facilities of the region include the NASA-Langley Research Center, the Institute for Computer Applications in Science and Engineering (ICASE), and the Atlantic Marine Center of the National Oceanographic and Atmospheric Administration (NOAA).

Financial aid is available in the form of research and teaching assistantships and fellowships with stipends up to $12,000 per academic year.

Further information and application forms may be obtained by writing to:

**GRADUATE PROGRAM DIRECTOR — Department of Mathematics and Statistics**

Old Dominion University — Norfolk, VA 23529-0077

---

1294
**University of Virginia, Charlottesville 22903**

**APPLIED MATHEMATICS**

James M. Ortega, Chairman

Applications due: 2/1/88*

Faculty 11; Published 4

Graduate Students: full-time 20; full-time first year 6; part-time 1

<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND FEES paid to student</th>
<th>FEES paid by student ($)</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching Fellowship (2:2)</td>
<td>9000 9</td>
<td>0-2500 20</td>
<td>Grading</td>
<td>Bachelor's by inst. 2009</td>
</tr>
<tr>
<td>Teaching Assistantship (8:8)</td>
<td>8500-9500 9</td>
<td>0-2500 20</td>
<td>Research</td>
<td>Bachelor's by dept. 2</td>
</tr>
<tr>
<td>Research Assistantship (8:0)</td>
<td>8500-9500 9</td>
<td>0-2500 20</td>
<td>Research</td>
<td>Master's by dept. 7</td>
</tr>
</tbody>
</table>

*For initial round of offers.

**MATHMATICS**

S. James Taylor, Chairman

Applications due: 2/1/88

Faculty 31; Published 29

Graduate Students: full-time 46; full-time first year 14; part-time 0

<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND FEES paid to student</th>
<th>FEES paid by student ($)</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching Fellowship (10:5:10)</td>
<td>7500 9</td>
<td>0-1900 3^c</td>
<td>Teaching</td>
<td>Ph. D. (84/87) ANT 5, AFA 5,</td>
</tr>
<tr>
<td>Teaching Assistantship (32:32)</td>
<td>7500-10000 9</td>
<td>0-1900 3^c</td>
<td>Teaching</td>
<td>GT 3. Total: 13</td>
</tr>
</tbody>
</table>

**Virginia Polytechnic Institute and State University, Blacksburg 24061**

**COMPUTER SCIENCE**

Donald C. S. Allison, Head

Applications due: 1/31/88

Faculty 27; Published 22

Graduate Students: full-time 90; full-time first year 35; part-time 5

<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND FEES paid to student</th>
<th>FEES paid by student ($)</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fellowship (1:--)</td>
<td>12 1571 sem.</td>
<td>0-2764 20</td>
<td>Grading, teaching</td>
<td>Bachelor's by inst. 3581</td>
</tr>
<tr>
<td>Teaching Assistantship (37:5:10)</td>
<td>970-1035 9</td>
<td>1571 sem. 20</td>
<td>Grading, teaching</td>
<td>Bachelor's by dept. 127</td>
</tr>
<tr>
<td>Research Assistantship (8:--)</td>
<td>970-1035 9</td>
<td>1571 sem. 20</td>
<td>Research</td>
<td>Master's by dept. 45</td>
</tr>
<tr>
<td>Other (4:--)</td>
<td>1250-1315 9</td>
<td>1571 sem. 20</td>
<td>Research</td>
<td>Ph. D. (84/87) CS 9. Total: 9</td>
</tr>
</tbody>
</table>

*Student receives tuition and fees plus $2,000 for other expenses.

**MATHMATICS**

C. Wayne Patty, Head

Applications due: 2/1/88

Faculty 68; Published 46

Graduate Students: full-time 89; full-time first year 34; part-time 1

<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND FEES paid to student</th>
<th>FEES paid by student ($)</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching Assistantship (70:20)</td>
<td>8730-9315 9</td>
<td>0-2764 20</td>
<td>Grading, teaching</td>
<td>Bachelor's by inst. 3581</td>
</tr>
</tbody>
</table>

**STATISTICS**

Klaus Hinkelmann, Chairman

Applications due: 1/31/88

Faculty 20; Published 20

Graduate Students: full-time 59; full-time first year 26; part-time 0

<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND FEES paid to student</th>
<th>FEES paid by student ($)</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching Assistantship (21:4)</td>
<td>8235-8865 9</td>
<td>2675 20</td>
<td>Teaching, consulting</td>
<td>Bachelor's by inst. 3581</td>
</tr>
<tr>
<td>Research Assistantship (4:5:0)</td>
<td>8235-8865 9</td>
<td>2675 20</td>
<td>Research, consulting</td>
<td>Bachelor's by dept. 19</td>
</tr>
<tr>
<td>Graduate Assistantship (11:11)</td>
<td>8235-8865 9</td>
<td>2675 20</td>
<td>Grading, consulting</td>
<td>Master's by dept. 17</td>
</tr>
</tbody>
</table>

**UNIVERSITY OF VIRGINIA**

**GRADUATE STUDIES IN APPLIED MATHEMATICS**

The Department of Applied Mathematics offers masters and Ph.D. degrees in Applied Mathematics. The research strengths in the department are in the areas of scientific computing and numerical analysis with particular emphasis on parallel computing, in theoretical and computational fluid and solid mechanics, and in control theory. The Department has a close association with Computer Science and the location of the Department within the School of Engineering and Applied Science allows for programs of study which combine courses in Applied Mathematics with courses in Computer Science and in Engineering. Research and teaching assistantships are available, with possible tuition fellowships. For information write:

Department of Applied Mathematics
University of Virginia, Thornton Hall, Charlottesville, VA 22903
### Washington

**Eastern Washington University, Cheney 99004**

**MATHEMATICS**

<table>
<thead>
<tr>
<th>Applications due: 3/1/88</th>
<th>Bachelor's by inst. 1249</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jack A. Swan, Chairman</td>
<td>Bachelor's by dept. 24</td>
</tr>
<tr>
<td>Graduate Students:</td>
<td>Master's by dept. 3</td>
</tr>
<tr>
<td>Teaching Assistantship</td>
<td></td>
</tr>
<tr>
<td>(8:2) 8497-8797</td>
<td></td>
</tr>
<tr>
<td>Research Assistantship</td>
<td></td>
</tr>
<tr>
<td>(1:1) 5615</td>
<td></td>
</tr>
</tbody>
</table>

**University of Washington, Seattle 98195**

**APPLIED MATHEMATICS**

<table>
<thead>
<tr>
<th>Applications due: 2/1/88</th>
<th>Bachelor's by inst. 4959</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frederic Y. W. Wan, Chairman</td>
<td>Bachelor's by dept. 4</td>
</tr>
<tr>
<td>Graduate Students:</td>
<td>Master's by dept. 8</td>
</tr>
<tr>
<td>Fellowship (1:1)</td>
<td>Ph. D. (84/87) AM 7 Total: 7</td>
</tr>
<tr>
<td>Teaching Assistantship (6.67:3)</td>
<td>748-802/mo.</td>
</tr>
<tr>
<td>Research Assistantship (13:--)</td>
<td>748-802/mo.</td>
</tr>
<tr>
<td>Graduate Opportunity</td>
<td></td>
</tr>
<tr>
<td>Research Program (1.67:1)**</td>
<td>748-802/mo.</td>
</tr>
</tbody>
</table>

* Tuition usually waived, fees $103.
** Competing on a university-wide basis.

**BOSTATISTICS**

<table>
<thead>
<tr>
<th>Applications due: 4/15/88</th>
<th>Bachelor's by inst. 4959</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norman Breslow, Chairman</td>
<td>Bachelor's by dept. 11</td>
</tr>
<tr>
<td>Graduate Students:</td>
<td>Master's by dept. 12</td>
</tr>
<tr>
<td>Fellowship (16:2)</td>
<td>Ph. D. (84/87) S 1 Total: 1</td>
</tr>
<tr>
<td>Teaching Assistantship (4:2)</td>
<td>9288-10728</td>
</tr>
<tr>
<td>Research Assistantship (35:10)</td>
<td>9288-10728</td>
</tr>
</tbody>
</table>

**MATHEMATICS**

<table>
<thead>
<tr>
<th>Applications due: 2/15/88</th>
<th>Bachelor's by inst. 4959</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robert B. Warfield, Chairman</td>
<td>Bachelor's by dept. 182</td>
</tr>
<tr>
<td>Graduate Students:</td>
<td>Master's by dept. 12</td>
</tr>
<tr>
<td>Fellowship (6:3)</td>
<td>Ph. D. (84/87) ANT 3, AFA 5,</td>
</tr>
<tr>
<td>Teaching Fellowship (1:1)</td>
<td>GT 8, P 2, AM 2. Total: 20</td>
</tr>
<tr>
<td>Teaching Assistantship (55:16)</td>
<td>6732-7775</td>
</tr>
<tr>
<td>Research Assistantship (8:2)</td>
<td>6732-7776</td>
</tr>
</tbody>
</table>

*4 to 6 hours in class, plus office hours and preparation time.

**STATISTICS**

<table>
<thead>
<tr>
<th>Applications due: 4/15/88</th>
<th>Bachelor's by inst. 4959</th>
</tr>
</thead>
<tbody>
<tr>
<td>Galen R. Shorack, Chairman</td>
<td>Bachelor's by dept. 7</td>
</tr>
<tr>
<td>Graduate Students:</td>
<td>Master's by dept. 4</td>
</tr>
<tr>
<td>Teaching Assistantship (11:5)</td>
<td>6732-7776</td>
</tr>
<tr>
<td>Research Assistantship (17:4)</td>
<td>6732-7776</td>
</tr>
</tbody>
</table>

**Washington State University, Pullman 99164**

**MATHEMATICS**

<table>
<thead>
<tr>
<th>Applications due: 2/1/88</th>
<th>Bachelor's by inst. 2903</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michael J. Kallaher, Chairman</td>
<td>Bachelor's by dept. 28</td>
</tr>
<tr>
<td>Graduate Students:</td>
<td>Master's by dept. 6</td>
</tr>
<tr>
<td>Fellowship (1:--)</td>
<td>Ph. D. (84/87) ANT 2, AFA 3,</td>
</tr>
<tr>
<td>Teaching Assistantship (29:10)</td>
<td>6768-7209</td>
</tr>
<tr>
<td>Research Assistantship (3:2)</td>
<td>6543-8993</td>
</tr>
</tbody>
</table>

**Western Washington University, Bellingham 98225**

**MATHEMATICS**

<table>
<thead>
<tr>
<th>Applications due: 3/1/88</th>
<th>Bachelor's by inst. 1452</th>
</tr>
</thead>
<tbody>
<tr>
<td>Richard Levin, Acting Chairman</td>
<td>Bachelor's by dept. 68</td>
</tr>
<tr>
<td>Graduate Students:</td>
<td>Master's by dept. 6</td>
</tr>
<tr>
<td>Teaching Assistantship (19:10)*</td>
<td>5862</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Total no. : no. anticipated)</td>
<td>paid to student</td>
<td>paid by</td>
<td>hours</td>
<td>Academic year</td>
</tr>
<tr>
<td>dollars</td>
<td>months</td>
<td>type</td>
<td></td>
<td>1986-1987</td>
</tr>
</tbody>
</table>

**West Virginia**

**Marshall University, Huntington 25701**

**MATHEMATICS**

C. V. Peels, Chairman

<table>
<thead>
<tr>
<th>Applications due: 4/15/88</th>
<th>Faculty 16; Published 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate Students:</td>
<td>full-time 6; full-time first year 2; part-time 7</td>
</tr>
</tbody>
</table>

Teaching Assistantship (13:-) 1700-3400 9 22.50-148 6 Teaching
Other (1:-) 1250-2500 9 22.50-148 10-20 Tutor

**West Virginia University, Morgantown 26506**

**MATHEMATICS**

Alphonse Baartmans, Chairman

<table>
<thead>
<tr>
<th>Applications due: 3/15/88</th>
<th>Faculty 28; Published 17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate Students:</td>
<td>full-time 31; full-time first year 12; part-time 14</td>
</tr>
</tbody>
</table>

Teaching Assistantship (24:30) 5670 9 45 15 Grading, teaching
Research Assistantship (5:-) 5670 9 45 15 Research

**Wisconsin**

**University of Wisconsin–Eau Claire 54701**

**MATHEMATICS**

Marshall E. Wick, Chairman

<table>
<thead>
<tr>
<th>Applications due: 3/1/88</th>
<th>Faculty 38; Published 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate Students:</td>
<td>full-time 1; full-time first year 1; part-time 0</td>
</tr>
</tbody>
</table>

Fellowship (1 or 2:1 or 2) 250/sem. 915/sem.
Graduate Assistantship (1 or 2:1 or 2) 20 *
*Assist with grading, research, and miscellaneous.

**University of Wisconsin, Madison 53706**

**MATHEMATICS**

Thomas G. Kurtz, Chairman

<table>
<thead>
<tr>
<th>Applications due: 1/15/88</th>
<th>Faculty 72; Published 62</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate Students:</td>
<td>full-time 172; full-time first year 40; part-time 0</td>
</tr>
</tbody>
</table>

Fellowship (6:20) 12500-12504 12 3338 9-12 Research*
Teaching Assistantship (160**.35) 10740-11264 9 2608 20 Grading, teaching, research
Research Assistantship (3**.**) 25 percent teaching assistantship available per semester if desired.
***Not available to first year students.

**University of Wisconsin–Milwaukee 53201**

**MATHEMATICAL SCIENCES**

Thomas O'Bryan, Chairperson

<table>
<thead>
<tr>
<th>Applications due: *</th>
<th>Faculty 30; Published 25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate Students:</td>
<td>full-time 65; full-time first year 33; part-time 5</td>
</tr>
</tbody>
</table>

Fellowship (2:1) 9385** 12
Teaching Fellowship (1:1) 11774-12665 9 6 Teaching
Teaching Assistantship (65:20) 9774-10665** 9 6 Teaching
**Rates subject to possible increase.

**University of Wisconsin–Oshkosh 54901**

**MATHEMATICS**

N. J. Kuenzi, Chairman

<table>
<thead>
<tr>
<th>Applications due: 4/15/88</th>
<th>Faculty 7; Published 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate Students:</td>
<td>full-time 1; full-time first year 1; part-time 16</td>
</tr>
</tbody>
</table>

Research Assistantship (1:-) 5000 9 1000 20

---

**Degrees Awarded**

**Academic Year**

<table>
<thead>
<tr>
<th>Bachelor's by inst.</th>
<th>Bachelor's by dept.</th>
<th>Master's by dept.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986-1987</td>
<td>1041</td>
<td>3</td>
</tr>
<tr>
<td>670</td>
<td>20</td>
<td>17</td>
</tr>
<tr>
<td>6002</td>
<td>123</td>
<td>26</td>
</tr>
<tr>
<td>1580</td>
<td>39</td>
<td>0</td>
</tr>
<tr>
<td>2473</td>
<td>20</td>
<td>5</td>
</tr>
<tr>
<td>1450</td>
<td>30</td>
<td>1</td>
</tr>
</tbody>
</table>

1297
Wyoming

University of Wyoming, Laramie 82071

MATHEMATICS
Robert Mena, Head
Graduate Students: full-time 38; full-time first year 5; part-time 2

Teaching Assistantship (23:5) 6000-11000 9-12 Waived 18-24 Teaching
Research Assistantship (6:2) 6000-11000 9-12 Waived 18-24 Research

STATISTICS
Robert S. Cochran, Chairman
Graduate Students: full-time 18; full-time first year 1; part-time 0

Teaching Assistantship (7--) 2970-5940 9 9-18 Teaching, grading
Research Assistantship (2-3--) 2970-5940 9 9-18 Research

Canada

Dalhousie University, Halifax, Nova Scotia B3H 4H8

MATHEMATICS, STATISTICS, AND COMPUTING SCIENCE
P. A. Fillmore, Chairman

Teaching Fellowship (25:15) 11500 12 1700 6 Tutorials

McGill University, Montréal, Québec H3A 2K6

MATHEMATICS AND STATISTICS
Michael Herschorn, Chairman

Incoming students from the Department (7-8 per year) receive a minimum of Canadian $10000 for mixed duties.

Memorial University of Newfoundland, St. John's, Newfoundland A1C 5S7

MATHEMATICS AND STATISTICS
Bruce Shawyer, Head

Fellowship * 6000 12
Teaching Assistantship* 2000 9-12 16
Research Assistantship* 3000 9-12
*No fixed number.

Ottawa-Carleton Mathematics and Statistics Institute, Ottawa, Ontario K1N 6N5

W. D. Burgess and M. Moore, Directors

Applications due: 3/1/88

Fellowship (6-5) 1000-5000 12 ***
Teaching Assistantship (37:15) 2500-5000 9 *** 10 Grading
Research Assistantship (28:10) 1000-7000 12 *** Teaching, research

*Carleton University: 2132; University of Ottawa: 3616.
**Carleton University: 50; University of Ottawa: 20.
***Domestic: $2125; foreign: $8960.
Queen's University, Kingston, Ontario K7L 3N6

COMPUTING AND INFORMATION SCIENCE
David T. Bernard, Chairman

Applications due: 3/1/88
Faculty 20; Published 20

Graduate Students: full-time 60; full-time first year 35; part-time 5

Fellowship (40:35) 6000-12000 12 *
Teaching Assistantship (60:40) 2000-5000 6 *
Research Assistantship (40:35) 6000-12000 12 *

*Canadian student: $1715 first year (first two years for Ph.D.), $324 per term subsequently; foreign student: $7400 first year (first two years for Ph.D.), $1272 per term subsequently. Tuition bursaries also available.

Simon Fraser University, Burnaby, British Columbia V5A 1S6

COMPUTING SCIENCE
Richard F. Hobson, Director

Faculty 22; Published -

Graduate Students: full-time 70; full-time first year 16; part-time 3

Fellowship (-:-) 2000-3800 1407-2680 Research
Teaching Assistantship (-:-) 645-3820 1407-2680 3-15 Grading, teaching
Research Assistantship (-:-) 645-4000 1407-2680 3-15 Research

University of Alberta, Edmonton, Alberta T6G 2G1

MATHEMATICS (Ad on p. 1300)
L. H. Erbe, Chairman

Applications due: 7/1/88
Faculty 64; Published 50

Graduate Students: full-time 45; full-time first year 11; part-time 1

Fellowship (8:unlimited) 8384-10080 1200* 12 Grading, lab, teaching
NSERC Summer Support (-:-) 2800 3

*Approximate.

STATISTICS AND APPLIED PROBABILITY (Ad on p. 1300)
K. L. Mehra, Acting Chairman

Applications due: Open
Faculty 13, Published 13

Teaching Assistantship (12:12) 8300-10000 12 Grading, teaching

OTTAWA-CARLETON MATHEMATICS AND STATISTICS INSTITUTE

The Mathematics and Statistics Departments of Carleton University and the University of Ottawa amalgamated their graduate programmes in 1984 to form the Institute which offers the MSc (with or without thesis) and the PhD. The Institute makes available a large selection of areas of research and of courses. It has 56 faculty members and there are 15 MSc and 26 PhD students currently enrolled. Assistantships of $8500 to $11000 per year are available (foreign students may receive more to compensate for higher tuition fees). Ottawa, the National Capital, has excellent library facilities and exceptional employment opportunities. It is rich in culture, sport and entertainment.
THE UNIVERSITY OF ALBERTA

The University of Alberta offers graduate programs leading to the M.Sc. degree with thesis, the M.Sc. non-thesis degree and the Ph.D. degree in most branches of Pure and Applied Mathematics represented by its 61 member Department of Mathematics. Opportunities for studies of an interdisciplinary nature are provided in co-operation with other departments, including the Departments of Statistics and Applied Probability, Computing Science and Physics.

Teaching Assistantships are available carrying a stipend between $8,384 and $10,080 for 8 months. In addition, summer support of about $2,650 is generally available.

The University of Alberta, Canada's third largest University, is located in Edmonton, Alberta's capital city of 550,000 people, providing a wide variety of cultural and recreational attractions.

Inquiries are invited and should be addressed to:

The Graduate Committee, Department of Mathematics
The University of Alberta, Edmonton, Alberta, Canada, T6G 2G1

---

Department of Statistics & Applied Probability
Graduate Studies
University of Alberta

Programmes and Facilities: The Department of Statistics and Applied Probability offers graduate programs leading to the M.Sc. degree with thesis, the M.Sc. non-thesis degree and the Ph.D. degree. The Mathematics and Statistics Library which is located in the same building as the Department, contains over 30,000 books and subscribes to 400 journals. The University of Alberta has one of the largest computer facilities in Canada operating an AMDAHL 5870 with 32 million bytes of memory under the Michigan Terminal System and with extensive auxiliary equipment and services.

Financial Assistance: Assistantships are available, carrying stipends of from $8,300 to $10,000 for 8 months. Summer support of about $3,000 for graduate students on thesis programs is generally available. Senior doctoral candidates may apply for a Dissertation Fellowship ($11,500), an Izaak Walton Killam Memorial Scholarship ($12,500) and other awards. NSERC Post-graduate Scholarships ($11,500) may also be applied for.

Inquiries and applications are invited and should be addressed to:

The Graduate Committee Chairman
Department of Statistics and Applied Probability
434 Central Academic Building
University of Alberta
Edmonton, Alberta
Canada
T6G 2G1
<table>
<thead>
<tr>
<th>Type of Assistance</th>
<th>Stipend</th>
<th>Fees</th>
<th>Service Required</th>
<th>Degrees Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>University of British Columbia, Vancouver, British Columbia V6T 1Y4</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>David W. Boyd, Head</td>
<td>6420</td>
<td>12</td>
<td>12</td>
<td>Bachelor's by inst. 3987</td>
</tr>
<tr>
<td>Fellowship (10:4)</td>
<td>9500-11600</td>
<td>12</td>
<td>12</td>
<td>Master's by dept. 3 Ph. D. (84/87) AFA 4, GT 3, P 1, AM 3. Total: 11</td>
</tr>
<tr>
<td>Teaching Assistantship (39:13)</td>
<td>6420-6670</td>
<td>12</td>
<td>Grading, tutoring, teaching</td>
<td></td>
</tr>
<tr>
<td>Research Assistantship (26:6)</td>
<td>2000-3520</td>
<td>3-12</td>
<td>Research</td>
<td></td>
</tr>
<tr>
<td>$1768 for first year, reduced for subsequent years.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statistics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Zidek, Head</td>
<td>10500</td>
<td>12</td>
<td>12</td>
<td>Bachelor's by inst. 3987</td>
</tr>
<tr>
<td>University Fellowship (---)</td>
<td>4293-4462</td>
<td>12</td>
<td>Teaching, grading</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (6:4)</td>
<td>3233</td>
<td>12</td>
<td>Research</td>
<td></td>
</tr>
<tr>
<td>Research Assistantship (6:3)</td>
<td>3233</td>
<td>12</td>
<td>Research</td>
<td></td>
</tr>
<tr>
<td>$109.50 per month if 2-4 month units given.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>University of Calgary, Calgary, Alberta T2N 1N4</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer Science</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>John Kendall, Chairman</td>
<td>4293-5037</td>
<td>12</td>
<td>Teaching, grading</td>
<td></td>
</tr>
<tr>
<td>Fellowship (12:6)</td>
<td>4293-4462</td>
<td>12</td>
<td>Research</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (30:15)</td>
<td>3233</td>
<td>12</td>
<td>Research</td>
<td></td>
</tr>
<tr>
<td>Research Assistantship (14:5)</td>
<td>3233</td>
<td>12</td>
<td>Research</td>
<td></td>
</tr>
<tr>
<td>Math and Statistics (Ad on p. 1302)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P. J. Browne, Chairman</td>
<td>3233</td>
<td>12</td>
<td>Research</td>
<td></td>
</tr>
<tr>
<td>Fellowship (10:4)</td>
<td>9500-11600</td>
<td>12</td>
<td>Teaching, grading</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (39:13)</td>
<td>6420-6670</td>
<td>12</td>
<td>Grading, tutoring, teaching</td>
<td></td>
</tr>
<tr>
<td>Research Assistantship (26:6)</td>
<td>2000-3520</td>
<td>3-12</td>
<td>Research</td>
<td></td>
</tr>
<tr>
<td>$1768 for first year, reduced for subsequent years.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>University of Manitoba, Winnipeg, Manitoba R3T 2N2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statistics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L. K. Chan, Chairman</td>
<td>4293-5037</td>
<td>12</td>
<td>Teaching, grading</td>
<td></td>
</tr>
<tr>
<td>Scholarship (open/open)</td>
<td>3233</td>
<td>12</td>
<td>Research</td>
<td></td>
</tr>
<tr>
<td>$109.50 per month if 2-4 month units given.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>University of Regina, Regina, Saskatchewan S4S 0A2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics and Statistics</td>
<td>3742-4342**</td>
<td>16</td>
<td>Teaching</td>
<td></td>
</tr>
<tr>
<td>R. J. Tomkins, Head</td>
<td>3474-3970**</td>
<td>12</td>
<td>Grading, teaching</td>
<td></td>
</tr>
<tr>
<td>Scholarship*</td>
<td>3232-4040**</td>
<td>12</td>
<td>Grading, teaching</td>
<td></td>
</tr>
<tr>
<td>$109.50 per month if 2-4 month units given.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Saskatchewan, Saskatoon, Saskatchewan S7N 0W0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MATHEMATICS</strong></td>
<td>Applications due: Open</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ram Manohar, Head</td>
<td>Faculty 30, Published 18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Graduate Students:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>full-time 23; full-time first year 5; part-time 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fellowship (10: unlimited)</strong></td>
<td>9900-13500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>1300</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Teaching Fellowship (9:5)</strong></td>
<td>8500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>1300</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Teaching</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Toronto, Toronto, Ontario M5S 1A1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MATHEMATICS</strong></td>
<td>Applications due: 8/31/88</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Friedlander, Chairman</td>
<td>Faculty 50; Published —</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Graduate Students:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>full-time 56; full-time first year 13; part-time 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fellowship (56:50-56)</strong></td>
<td>3500-17500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>1686.90*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Teaching Assistantship (106:105)</strong></td>
<td>17.83-22.80/hr. 9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Visa students: $7074.90.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Victoria, Victoria, British Columbia V8W 2Y2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MATHEMATICS</strong></td>
<td>Applications due: 2/15/88</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Robert Miers, Chairman</td>
<td>Faculty 25; Published 17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Graduate Students:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>full-time 8; full-time first year 5; part-time 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fellowship (2-4:2-4)</strong></td>
<td>8500-11000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>1300</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Teaching Assistantship (2-4:2-4)</strong></td>
<td>8500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1300 variable</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Research Assistantship (2-4:2-4)</strong></td>
<td>8500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1300 variable</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**THE UNIVERSITY OF CALGARY**

**GRADUATE STUDIES IN MATHEMATICS AND STATISTICS**

*Research Areas:*


*Teaching/Research Assistantships: $6466-$10,074 per 8 months. Summer support of approximately $4293 per 4 months is generally available.*

*For further information write to:*

Director of Graduate Studies
Department of Mathematics & Statistics
University of Calgary
2500 University Drive N.W.
Calgary Alberta, Canada T2N 1N4
University of Waterloo, Waterloo, Ontario N2L 3G1

APPLIED MATHEMATICS
B. Forte, Chairman
Applications due: 4/15/88
Faculty 27; Published 25
Graduate Students: full-time 26; full-time first year 7; part-time 11
Teaching Assistantship (27:18) 3626–10878 12 * 10 Teaching, grading
Research Assistantship (12:14) 10560 12 * 10 Research
NSERC (**:***) 12500–13500 12 *
Bursaries (**:****) 500–1200 4–12 *
*Canadian or landed immigrants: $1665 per year; visa students: $8150 per year.
**Not known.
***Not yet determined.

COMBINATORICS AND OPTIMIZATION
Paul J. Schellenberg, Chairman
Applications due: 4/1/88
Faculty 23; Published 19
Graduate Students: full-time 30; full-time first year 9; part-time 11
Teaching Assistantship (77:77) 3626–10878 12 * 10 Teaching, grading
Research Assistantship (30:9) 10560 12 * 10 Research
NSERC (**:***) 12500–13500 12 *
Bursaries (**:****) 500–1200 4–12 *
*Canadian or landed immigrants: $1665; visa students: $8150 per year.
**Not known.
***Not yet determined.

COMPUTER SCIENCE
J. A. Brzozowski, Chairman
Applications due: 2/28/88
Faculty 39; Published 40
Graduate Students: full-time 121; full-time first year 5; part-time 11
Teaching Assistantship (265:67) 3626–10878 12 * 10 Teaching, grading
Research Assistantship (52:15) 10560 12 * 10 Research
NSERC (**:***) 12500–13500 12 *
Bursaries (**:****) 500–1200 4–12 *
*Canadian or landed immigrants: $1665; visa students: $8150.
**Not known.
***Not yet determined.

PURE MATHEMATICS
F. Zorzitto, Chairman
Applications due: 4/15/88
Faculty 22; Published 18
Graduate Students: full-time 15; full-time first year 5; part-time 7
Teaching Assistantship (13:2) 3626–10878 12 * 10 Teaching, grading
Research Assistantship (9:3) 10560 12 * 10 Research
NSERC (**:***) 12500–13500 12 *
Bursaries (**:****) 500–1200 4–12 *
*Canadian or landed immigrants: $1665; visa students: $8150 per year.
**Not known.
***Not yet determined.

STATISTICS AND ACTUARIAL SCIENCE
J. F. Lawless, Chairman
Applications due: 4/15/88
Faculty 33; Published 28
Graduate Students: full-time 45; full-time first year 25; part-time 7
Teaching Assistantship (23:9) 3626–10878 12 * 10 Teaching, grading
Research Assistantship (18:6) 10560 12 * 10 Research
NSERC (**:***) 12500–13500 12 *
Bursaries (**:****) 500–1200 4–12 *
*Canadian or landed immigrants: $1665; visa students: $8150 per year.
**Not known.
***Not yet determined.
<table>
<thead>
<tr>
<th>Type of Assistance</th>
<th>Stipend</th>
<th>Fees</th>
<th>Service Required</th>
<th>Degrees Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fellowship (4:*)**</td>
<td>9100-17500</td>
<td>12</td>
<td>***</td>
<td>Academic Year 1986-1987</td>
</tr>
<tr>
<td>Scholarship (4:-)**</td>
<td>1000-2000</td>
<td>12</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>Teaching Assistantship (4:3-7)</td>
<td>3068-6135</td>
<td>9</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>Research Assistantship (2:3)**</td>
<td>800-5000</td>
<td>12</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>Visa Bursary (--5)**</td>
<td>5000-7046</td>
<td>12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*External competition.
**Students generally hold a combination of awards.
***Permanent resident of Canada: $1500; visa students: $8500.

University of Western Ontario, London, Ontario N6A 5B7

MATHEMATICS

Applications due: 2/28/88

D. Borwein, Head

Faculty 24; Published 18

Graduate Students: full-time 6; full-time first year 5; part-time 2

Bachelor's by inst. 3636
Bachelor's by dept. 40
Master's by dept. 6

Ph. D. (84/87) AFA 1, GT 3.

Total: 4

University of Windsor, Windsor, Ontario N9B 3P4

MATHEMATICS AND STATISTICS

Applications due: Open

Ronald M. Barron, Chairman

Faculty 23; Published 20

Graduate Students: full-time 23; full-time first year 9; part-time 1

Bachelor's by inst. 865
Bachelor's by dept. 49

Ph. D. (84/87) S 1, AM 2.

Total: 3

York University, North York, Ontario M3J 1P3

MATHEMATICS

Applications due: 6/1/88

George Tourlakis, Director

Faculty 55; Published -

Graduate Students: full-time 27; full-time first year 15; part-time 27

Master's by dept. 4

Ph. D. (84/87) AFA 1, GT 3.
Critical, Historical, or Expository Theses

Departments supplying the information published on the preceding pages were asked the following question: Will your department accept a critical, historical or expository thesis of sufficiently high quality for the Ph.D. degree? D.A. degree? or other degree? Affirmative responses to this question are listed below.

Arizona

Univ of Arizona
Applied Mathematics Ph.D.
Mathematics Ph.D.

Georgia

Univ of Georgia
Mathematics and
Computer Science D.A.

Idaho

Idaho State Univ
Mathematics D.A.

Illinois

Illinois State Univ
Mathematics D.A.
Univ of Chicago
Statistics Ph.D.
Univ of Illinois, Chicago
Mathematics, Statistics,
and Computer Science D.A.
Univ of Illinois, Urbana
Mathematics
Statistics Ph.D.

Iowa

Univ of Iowa
Computer Science Ph.D.

Kansas

Kansas State Univ
Computing and
Information Sciences Ph.D.

Massachusetts

Boston Univ
Mathematics Ph.D.

Michigan

Michigan State Univ
Statistics and
Probability Ph.D.
Wayne State Univ
Computer Science Ph.D.

Mississippi

Univ of Mississippi
Mathematics Ph.D.

Missouri

St. Louis Univ
Mathematics and
Computer Science Ph.D.
Washington Univ
Computer Science D.Sc.

Montana

Univ of Montana
Mathematical Sciences Ph.D.

New Hampshire

Dartmouth Coll
Mathematics and
Computer Science Ph.D.

New Mexico

New Mexico State Univ
Computer Science Ph.D.

New York

Cornell Univ
Mathematics Ph.D.
New York Univ, Courant
Mathematics Ph.D.
Rensselaer Polytechnic Inst
Mathematical Sciences Ph.D.
Syracuse Univ
Mathematics Ph.D.
Univ of Rochester
Computer Science Ph.D.

* In mathematics education.
North Carolina
Univ of North Carolina
Biostatistics Ph.D., Dr.Ph.

North Dakota
North Dakota State Univ
Mathematical Sciences Ph.D.

Ohio
Ohio Univ
Mathematics Ph.D.

Oklahoma
Oklahoma State Univ
Computing and Information Science Ed.D.
Mathematics Ed.D.
Univ of Oklahoma
Mathematics Ph.D.

Pennsylvania
Carnegie-Mellon Univ
Mathematics Ph.D., D.A.

Temple Univ
Mathematics Ph.D.

South Carolina
Medical Univ of South Carolina
Biometry Ph.D.

Tennessee
Memphis State Univ
Mathematical Sciences Ph.D.

Texas
North Texas State Univ
Mathematics Ph.D.
Rice Univ
Mathematical Sciences Ph.D.
Mathematics Ph.D.

Utah
Utah State Univ
Mathematics Ph.D.

Washington
Univ of Washington
Statistics Ph.D.
Washington State Univ
Mathematics Ph.D., D.A.

Wisconsin
Univ of Wisconsin, Madison
Mathematics Ph.D.

Wyoming
Univ of Wyoming
Mathematics Ph.D.
Statistics Ph.D.

Canada
Simon Fraser Univ
Computing Science Ph.D.
Univ of Calgary
Computer Science Ph.D.
Postdoctoral Positions
Research or Research/Teaching 1988-1989

Postdoctoral positions, either research or a combination of research and teaching available through academic departments for 1988-1989 are listed below. The first number refers to the total number in the department. The second number following the colon is the number available for 1988-1989. An asterisk is used to indicate that no information was supplied by the department.

Arizona
Univ of Arizona
Applied Mathematics 2:* Mathematics 3:2

California
California Inst of Tech
Applied Mathematics 5:varies Mathematics 9:*
Univ of California, Berkeley
Mathematics 16:16
Univ of California, Davis
Mathematics 5:*
Univ of California, Los Angeles
Mathematics 11:4
Univ of California, San Diego
Mathematics 5:1
Univ of California, Santa Barbara
Mathematics 5:5
Univ of Southern California
Mathematics 1:1

Colorado
Colorado State Univ
Statistics 1:0
Univ of Colorado at Denver
Mathematics 1:1

Connecticut
Yale Univ
Mathematics 10:10 Statistics *:9

District of Columbia
George Washington Univ
Statistics, Computer and Information Systems 1:1

Florida
Florida State Univ
Statistics 17:*
Univ Central Florida
Mathematics *:2

Georgia
Univ of Georgia
Mathematics Education 2:2

Illinois
Univ of Chicago
Mathematics 17:15
Univ of Illinois, Chicago
Mathematics, Statistics and Computer Science 4:varies

Indiana
Purdue Univ
Mathematics 12:7
Statistics 3:3

Iowa
Iowa State Univ
Mathematics 2:2

Kansas
Univ of Kansas
Mathematics 3:6

Maryland
Univ of Maryland, Baltimore County
Applied Mathematics and Statistics 1:0-1

Massachusetts
Boston Univ
Mathematics *:1
Harvard Univ
Biostatistics 14:7
Massachusetts Inst of Tech
Mathematics 29:7

Minnesota
Univ of Minnesota
Computer Science *:10
Mathematics 1:1

Mississippi
Univ of Mississippi
Mathematics 1:1

Missouri
Washington Univ
Computer Science 2:0
Mathematics 1:1

Nebraska
Univ of Nebraska-Lincoln
Mathematics and Statistics 1:1

New Jersey
Princeton Univ
Mathematics 10:10
Rutgers Univ
Mathematics 7:*

New Mexico
Univ of New Mexico
Mathematics and Statistics 25:5
<table>
<thead>
<tr>
<th>State</th>
<th>University Name</th>
<th>Mathematics Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York</td>
<td>City Univ of New York, Queens Coll</td>
<td>Mathematics 1:1</td>
</tr>
<tr>
<td></td>
<td>Cornell Univ</td>
<td>Applied Mathematics 14:6-8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Operations Research and Industrial Engineering 3:2</td>
</tr>
<tr>
<td></td>
<td>New York Univ, Courant</td>
<td>Computer Science 1:1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mathematics 20:20</td>
</tr>
<tr>
<td></td>
<td>Rensselaer Polytechnic Inst</td>
<td>Computer Science 1:1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mathematical Sciences 3:2</td>
</tr>
<tr>
<td></td>
<td>State Univ of New York at Albany</td>
<td>Mathematics and Statistics 2:1</td>
</tr>
<tr>
<td></td>
<td>State Univ of New York at Stony Brook</td>
<td>Applied Mathematics and Statistics 5:2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mathematics 2:2</td>
</tr>
<tr>
<td></td>
<td>Univ of Rochester</td>
<td>Computer Science 2:2</td>
</tr>
<tr>
<td>North Carolina</td>
<td>North Carolina State Univ</td>
<td>Operations Research 1:1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Statistics 4:0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Univ of North Carolina Biostatistics 3:3</td>
</tr>
<tr>
<td>Ohio</td>
<td>Bowling Green State Univ</td>
<td>Mathematics and Statistics 2:1</td>
</tr>
<tr>
<td></td>
<td>Case Western Reserve Univ</td>
<td>Epidemiology and Biostatistics 1:1</td>
</tr>
<tr>
<td></td>
<td>Ohio State Univ</td>
<td>Mathematics 3:3</td>
</tr>
<tr>
<td></td>
<td>Univ of Cincinnati</td>
<td>Mathematical Sciences 1:1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mathematics 12:*</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>Univ of Oklahoma</td>
<td>Mathematics 6:*</td>
</tr>
<tr>
<td>Oregon</td>
<td>Oregon State Univ</td>
<td>Mathematics 1:1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Statistics 1:1</td>
</tr>
<tr>
<td></td>
<td>Lehigh Univ</td>
<td>Mathematics 1:*</td>
</tr>
<tr>
<td></td>
<td>Temple Univ</td>
<td>Mathematics 41:8-14</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>Brown Univ</td>
<td>Applied Mathematics 38:14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mathematics 3:3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Univ of Rhode Island Mathematics 17:6</td>
</tr>
<tr>
<td>South Carolina</td>
<td>Clemson Univ</td>
<td>Mathematical Sciences 1:1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mathematics 1:1</td>
</tr>
<tr>
<td></td>
<td>Medical Univ of South Carolina Biometry</td>
<td>varies:*</td>
</tr>
<tr>
<td>Tennessee</td>
<td>Memphis State Univ</td>
<td>Mathematical Sciences 1:1</td>
</tr>
<tr>
<td></td>
<td>Vanderbilt Univ</td>
<td>Computer Science 1:0</td>
</tr>
<tr>
<td>Texas</td>
<td>Rice Univ</td>
<td>Mathematical Sciences 4:2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mathematics 3:*</td>
</tr>
<tr>
<td></td>
<td>Texas A&amp;M Univ</td>
<td>Mathematics 5:*</td>
</tr>
<tr>
<td></td>
<td>Univ of Houston</td>
<td>Mathematics 3:*</td>
</tr>
<tr>
<td>Utah</td>
<td>Univ of Utah</td>
<td>Mathematics 12:*</td>
</tr>
<tr>
<td>Virginia</td>
<td>Univ of Virginia</td>
<td>Mathematics 2:1</td>
</tr>
<tr>
<td></td>
<td>Virginia Polytechnic Inst and State Univ</td>
<td>Computer Science 1:1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mathematics 2:2</td>
</tr>
<tr>
<td>Washington</td>
<td>Eastern Washington Univ</td>
<td>Mathematics *:1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Biostatistics 2:0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mathematics 10:3</td>
</tr>
<tr>
<td>Canada</td>
<td>Dalhousie Univ</td>
<td>Mathematics, Statistics 6:4</td>
</tr>
<tr>
<td></td>
<td>McGill Univ</td>
<td>Mathematics and Statistics *:varies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Queen’s Univ Computing and Information Science 2:4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Univ of Alberta Mathematics 6:*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Univ of British Columbia Mathematics 7:*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Statistics 2:1-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Univ of Calgary Mathematics and Statistics 12:open</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Univ of Saskatchewan Mathematics 2:*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Univ of Toronto Mathematics 7:*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Univ of Waterloo Applied Mathematics 1:*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Combinatorics and Optimization 1:1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Computer Science 3:*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pure Mathematics 3:1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Univ of Western Ontario Mathematics 2:0</td>
</tr>
</tbody>
</table>

* Subject to financing.
Foreign Language Requirement for Ph.D.

Departments supplying the information published on the preceding pages were asked the following question: Does your department have, as a requirement for Ph.D., reading knowledge of a foreign language? How many? one or two? Affirmative responses to this question are listed below. A dash is used to indicate that no information was supplied by the department.

**Alabama**

Auburn Univ
Algebra, Combinatorics and Analysis 1
Foundations, Analysis and Topology 2
Univ of Alabama, Tuscaloosa
Management Science and Statistics 2*
Mathematics 2

**Alaska**

Univ of Alaska, Fairbanks
Mathematical Sciences 1

**Arizona**

Univ of Arizona
Applied Mathematics 1
Mathematics 2

**Arkansas**

Univ of Arkansas, Fayetteville
Mathematical Sciences 2

**California**

California Inst of Tech
Mathematics 2
Claremont Graduate School
Mathematics 2
Stanford Univ
Mathematics 2
Univ of California, Berkeley
Mathematics 2
Univ of California, Davis
Mathematics 2**
Univ of California, Irvine
Mathematics 2
Univ of California, Los Angeles
Mathematics 2
Univ of California, Riverside
Mathematics and Computer Science 1
Univ of California, San Diego
Mathematics 2
Univ of California, Santa Barbara
Mathematics 2
Statistics and Applied Probability 2
Univ of Southern California
Mathematics 2

**Colorado**

Colorado State Univ
Mathematics 1
Univ of Colorado, Boulder
Mathematics 2
Univ of Colorado, Colorado Springs
Mathematics
Univ of Colorado at Denver
Mathematics 1
Univ of Denver
Mathematics and Computer Science 2

**Connecticut**

Univ of Connecticut
Mathematics 2
Wesleyan Univ
Mathematics 2
Yale Univ
Mathematics 2

**District of Columbia**

American Univ
Mathematics and Statistics 2

**Florida**

Florida Atlantic Univ
Mathematics 1
Florida State Univ
Mathematics ***
Statistics 1
Univ of Florida
Industrial and Systems Engineering 1
Univ of Miami
Mathematics and Computer Science 1
Univ of South Florida
Mathematics 2

**Georgia**

Emory Univ
Mathematics and Computer Science 1
Georgia Inst of Tech
Mathematics 1
Univ of Georgia
Mathematics 1

**Hawaii**

Univ of Hawaii
Mathematics 2

**Idaho**

Univ of Idaho
Mathematics 2

**Illinois**

Northern Illinois Univ

---

* Or acceptable substitute (e.g. additional minor).
** Applied Program 1.
*** 2 for pure mathematics, 1 for applied mathematics.
<table>
<thead>
<tr>
<th>State</th>
<th>University</th>
<th>Mathematics</th>
<th>Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Louisiana</td>
<td>Louisiana State Univ</td>
<td>Mathematics 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tulane Univ</td>
<td>Mathematics 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Univ of Southwestern Louisiana</td>
<td>Mathematics 1</td>
<td></td>
</tr>
<tr>
<td>Missouri</td>
<td>St. Louis Univ</td>
<td>Mathematics 1</td>
<td>Computer Science 1</td>
</tr>
<tr>
<td></td>
<td>Univ of Missouri, Columbia</td>
<td>Mathematics 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Univ of Missouri, Kansas City</td>
<td>Mathematics 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Univ of Missouri, Rolla</td>
<td>Mathematics and Statistics 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Washington Univ</td>
<td>Mathematics 1</td>
<td></td>
</tr>
<tr>
<td>Maryland</td>
<td>Johns Hopkins Univ</td>
<td>Mathematics 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Univ of Maryland, College Park</td>
<td>Mathematics 2</td>
<td></td>
</tr>
<tr>
<td>Michigan</td>
<td>Michigan State Univ</td>
<td>Statistics and Probability 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Univ of Michigan</td>
<td>Mathematics 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Western Michigan Univ</td>
<td>Mathematics and Statistics 1</td>
<td></td>
</tr>
<tr>
<td>Minnesota</td>
<td>Univ of Minnesota</td>
<td>Mathematics 2</td>
<td></td>
</tr>
<tr>
<td>Nebraska</td>
<td>Univ of Nebraska-Lincoln</td>
<td>Mathematics and Statistics 1</td>
<td></td>
</tr>
<tr>
<td>New Hampshire</td>
<td>Dartmouth Coll</td>
<td>Mathematics and Computer Science 2</td>
<td></td>
</tr>
<tr>
<td>New Jersey</td>
<td>Princeton Univ</td>
<td>Mathematics 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rutgers Univ</td>
<td>Mathematics 1</td>
<td></td>
</tr>
<tr>
<td>New Mexico</td>
<td>Univ of New Mexico</td>
<td>Mathematics and Statistics 1</td>
<td></td>
</tr>
<tr>
<td>New York</td>
<td>City Univ of New York, Graduate Center</td>
<td>Mathematics 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Columbia Univ</td>
<td>Mathematics 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cornell Univ</td>
<td>Applied Mathematics 1</td>
<td>Mathematics 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Operations Research and Industrial Engineering 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Engineering 1</td>
<td></td>
</tr>
</tbody>
</table>

1 2 for pure mathematics, 1 for other fields.
<table>
<thead>
<tr>
<th>University</th>
<th>Mathematics Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York Univ, Courant</td>
<td>1</td>
</tr>
<tr>
<td>Computer Science</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>1</td>
</tr>
<tr>
<td>Polytechnic Univ</td>
<td>1</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>Rensselaer Polytechnic Inst</td>
<td>1</td>
</tr>
<tr>
<td>Mathematical Sciences</td>
<td></td>
</tr>
<tr>
<td>State Univ of New York at Albany</td>
<td>1</td>
</tr>
<tr>
<td>Mathematics and Statistics</td>
<td></td>
</tr>
<tr>
<td>State Univ of New York at Buffalo</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>State Univ of New York at Stony Brook</td>
<td>1</td>
</tr>
<tr>
<td>Applied Mathematics and Statistics</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>2</td>
</tr>
<tr>
<td>Syracuse Univ</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>Univ of Rochester</td>
<td>1</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>North Carolina</td>
<td>1</td>
</tr>
<tr>
<td>North Carolina State Univ</td>
<td>1</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>Mathematics and Science Education</td>
<td>2</td>
</tr>
<tr>
<td>Univ of North Carolina, Chapel Hill</td>
<td>1</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>Ohio</td>
<td>1</td>
</tr>
<tr>
<td>Bowling Green State Univ</td>
<td>1</td>
</tr>
<tr>
<td>Mathematics and Statistics</td>
<td></td>
</tr>
<tr>
<td>Case Western Reserve Univ</td>
<td>1</td>
</tr>
<tr>
<td>Mathematics and Statistics</td>
<td></td>
</tr>
<tr>
<td>Ohio State Univ</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>Univ of Cincinnati</td>
<td>1</td>
</tr>
<tr>
<td>Mathematical Sciences</td>
<td></td>
</tr>
<tr>
<td>Univ of Toledo</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>Oklahoma</td>
<td>1</td>
</tr>
<tr>
<td>Oklahoma State Univ</td>
<td>1</td>
</tr>
<tr>
<td>Computer Science</td>
<td>1</td>
</tr>
<tr>
<td>Mathematics</td>
<td>2</td>
</tr>
<tr>
<td>Univ of Oklahoma</td>
<td>1</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>Oregon</td>
<td>1</td>
</tr>
<tr>
<td>Oregon State Univ</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>Univ of Oregon</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>1</td>
</tr>
<tr>
<td>Bryn Mawr Coll</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>Drexel Univ</td>
<td>1</td>
</tr>
<tr>
<td>Mathematics and Computer Science</td>
<td></td>
</tr>
<tr>
<td>Lehigh Univ</td>
<td>1</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>Pennsylvania State Univ</td>
<td>1</td>
</tr>
<tr>
<td>Computer Science</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>2</td>
</tr>
<tr>
<td>Temple Univ</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>Univ of Pennsylvania</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>Univ of Pittsburgh</td>
<td>1</td>
</tr>
<tr>
<td>Biostatistics</td>
<td></td>
</tr>
<tr>
<td>Mathematics and Statistics</td>
<td>2</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>2</td>
</tr>
<tr>
<td>Brown Univ</td>
<td>1</td>
</tr>
<tr>
<td>Applied Mathematics</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>2</td>
</tr>
<tr>
<td>Univ of Rhode Island</td>
<td>1</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>South Carolina</td>
<td>1</td>
</tr>
<tr>
<td>Univ of South Carolina</td>
<td>1</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>Statistics</td>
<td>1</td>
</tr>
<tr>
<td>Tennessee</td>
<td>2</td>
</tr>
<tr>
<td>Memphis State Univ</td>
<td>1</td>
</tr>
<tr>
<td>Mathematical Sciences</td>
<td></td>
</tr>
<tr>
<td>Univ of Tennessee</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>Vanderbilt Univ</td>
<td>1</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>Texas</td>
<td>2</td>
</tr>
<tr>
<td>North Texas State Univ</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>Rice Univ</td>
<td>1</td>
</tr>
<tr>
<td>Mathematical Sciences</td>
<td></td>
</tr>
<tr>
<td>Oklahoma</td>
<td>1</td>
</tr>
<tr>
<td>Oklahoma State Univ</td>
<td>1</td>
</tr>
<tr>
<td>Computer Science</td>
<td>1</td>
</tr>
<tr>
<td>Mathematics</td>
<td>2</td>
</tr>
<tr>
<td>Univ of Oklahoma</td>
<td>1</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>Delaware University</td>
<td>1</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>Mathematics and Statistics</td>
<td>1</td>
</tr>
<tr>
<td>Washington</td>
<td>1</td>
</tr>
<tr>
<td>Univ of Washington</td>
<td>1</td>
</tr>
<tr>
<td>Applied Mathematics</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>Statistics</td>
<td>1</td>
</tr>
<tr>
<td>University of Wisconsin, Madison</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>Wisconsin</td>
<td>1</td>
</tr>
<tr>
<td>Univ of Wisconsin, Madison</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>University of Wisconsin, Milwaukee</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>2</td>
</tr>
<tr>
<td>Wyoming</td>
<td>1</td>
</tr>
<tr>
<td>Univ of Wyoming</td>
<td>1</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td>1</td>
</tr>
<tr>
<td>Dalhouse Univ</td>
<td>1</td>
</tr>
<tr>
<td>Mathematics, Statistics, and Computer Science</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

†† 1 if advanced proficiency, 2 if standard proficiency.
<table>
<thead>
<tr>
<th>McGill Univ</th>
<th>University of Manitoba</th>
<th>Computer Science</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics and Statistics 2</td>
<td>Statistics</td>
<td>–</td>
<td>Pure Mathematics</td>
</tr>
<tr>
<td>Ottawa-Carleton Mathematics and Statistics Institute 1</td>
<td>University of Saskatchewan Mathematics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Univ of Alberta Mathematics 1</td>
<td>University of Toronto Mathematics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Univ of British Columbia Mathematics †††</td>
<td>University of Waterloo Combinatorics and Optimization 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statistics 1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

††† 1 or 2 depending on program.
Stipends for Study and Travel

Graduate Support

American Association for the Advancement of Science. Summer Fellowship. Provides support for up to twenty outstanding graduate students in the social and natural sciences and engineering as intern reporters, researchers, and production assistants in the mass media for 10 weeks during the year. (Exceptional undergraduate or postdoctoral students will also be considered.) Fellows will work for radio and television stations, newspapers and magazines and will have their travel expenses and stipends paid by the AAAS. Fellows will have the opportunity to: observe and participate in the process by which events and ideas become news; improve their communication skills by teaming to describe complex technical subjects in a manner understandable by the public; and increase their understanding of editorial decision-making and the manner in which information is effectively disseminated. Each fellow will: attend an orientation and evaluation session in Washington, DC; begin the internship in mid-June; and submit an interim and final report to AAAS to help evaluate the program. Interested students should write for more information and application procedures to: Coordinator, Mass Media Science and Engineering Fellows Program, American Association for the Advancement of Science, 1333 H Street, N.W., 10th Floor, Washington, DC 20005. Application deadline will be about February 1.

American Society for Engineering Education. ONR Graduate Fellowship Program. About 50 three-year fellowships will be granted by the Office of Naval Research to support study and research leading to a doctoral degree in one of the following fields: electrical engineering, computer science, naval architecture and ocean engineering, materials science, applied physics, aerospace/mechanical engineering, physical oceanography, mathematics, biological/biomedical sciences, and cognitive/neural sciences. Applicants must be citizens of the U.S. (of any age) who will receive their baccalaureate degree in 1988, or who, by reason of military service, have not attended graduate school since receiving their baccalaureate degree. The fellowships, tenable at U.S. institutions offering doctoral degrees in the designated science and engineering disciplines, offer a stipend of $14,750 per 12-month year. In addition, ONR will provide the affiliated institution, on behalf of each Fellow, full tuition and fees, and will provide $2,000 per year to the Fellow's department. The application deadline is 1 February 1988. Application materials are available from the American Society for Engineering Education (ASEE), Eleven Dupont Circle, Suite 200, Washington, DC 20036 (202-745-3616 or 202-293-7080).

Associated Western Universities (AWU). AWU is a contractor for the U.S. Department of Energy, providing stipends and other necessary remuneration to teaching faculty members and to student participants who desire to become involved in an energy or energy-related research project at one of the cooperative laboratories or centers in the western U.S. For information telephone or write to Associated Western Universities, Inc., 142 East 200 South, Suite 200, Salt Lake City, Utah 84111 (801-364-5659).

California State Graduate Fellowships. The state offers fellowships of up to $6,490 to cover tuition and fees only, for residents of California who attend accredited graduate or professional schools located in California. Write to Graduate Fellowship Section, California Student Aid Commission, P.O. Box 942845, 1410 Fifth Street, Sacramento, California 94245-0001. The application deadline for 1988-1989 awards is March 2, 1988.

Center for Naval Analyses. Summer Employment. CNA, operated under contract with the Hudson Institute, is engaged in a broad spectrum of operations research and systems analysis studies for the U.S. Navy, Marine Corps, and other government agencies. Opportunities are available for graduate students in operations research, economics, engineering, mathematics, physics, and statistics. Assignments include analysis related to force level planning, manpower, logistics, and operational effectiveness. U.S. citizenship required. Submit resume to Mr. P. D. Moke, Employment Manager, Center for Naval Analyses, 4401 Ford Avenue, Alexandria, Virginia 22302-0268.
Committee on Institutional Cooperation. CIC Minorities Fellowships in the Sciences, Mathematics and Engineering. Fellowships are offered to American Indians, Black Americans and Hispanic Americans for graduate study leading to the Ph.D. The fellowships provide full tuition plus an annual stipend of at least $7,500 for each of four years. They may be used at any of these eleven CIC universities: University of Chicago, University of Illinois, Indiana University, University of Iowa, University of Michigan, Michigan State University, University of Minnesota, Northwestern University, Ohio State University, Purdue University, or University of Wisconsin. The deadline for applications for the 1988-1989 academic year is January 8, 1988. Detailed information about the program can be obtained by writing to the CIC Minorities Fellowships Program, 111 Kirkwood Hall, Indiana University, Bloomington, Indiana 47405.

General Electric Foundation. Provides research and study grants to selected institutions on a programmed, rotational basis, to be used by the graduate departments as they deem appropriate, which includes fellowships and teaching assistantships in some cases. The Foundation does not grant fellowships or other awards to individuals. For specific information regarding institutions to which grants have been made, write to David Latham, General Electric Foundation, Fairfield, Connecticut 06431.

Georgia Institute of Technology. President’s Fellowships. These stipends of $4,000 for twelve months, plus waiver of all tuition and fees, are awarded to first-year Ph.D. students and exceptional Masters students. The awards are highly competitive; selection is based on academic criteria and evidence of scholarship. Participants are expected to maintain high academic standing. The Fellowships are intended to supplement other forms of support and can be extended for three additional years based on academic performance and research potential. Equifaz Fellowship. Stipend of $8,000 per year plus waiver of all tuition and fees, awarded to a first-year Ph.D. student. The fellowship is renewable upon review for three additional years. Graduate Research/Teaching Assistantships. Part-time employment at the equivalent rates of $24,000 to $26,000 per 12 months, plus waiver of all tuition and fees. Appointments are based primarily on scholarship and ability to contribute to ongoing programs of the school. Prospective students who consider themselves highly qualified for an award should include with their application for admission a letter describing in as much detail as possible their qualifications and needs. Write to the Director of the School of Information and Computer Science, Georgia Institute of Technology, Atlanta, Georgia 30332.

Daniel and Florence Guggenheim Foundation. Fellowships for U.S. and Canadian residents interested in jet propulsion, energy conversion, fluid mechanics and flight structures. For information on flight structures, write to the Department of Civil Engineering and Engineering Mechanics, Columbia University. For information on applied physics and materials science; dynamics and control systems; energy conversion, propulsion, and combustion; energy and environmental policy; flight science and technology; and fluid mechanics, and computational and experimental fluid mechanics, write to the Director of Graduate Studies, Department of Mechanical and Aerospace Engineering, Princeton University, Princeton, New Jersey 08544.

Fannie and John Hertz Foundation Fellowships. The stipend is $15,000, plus $8,000 cost-of-education allowance per nine month year. Offered on the basis of academic (A– undergraduate GPA) and research performance, recommendations, and personal technical interview, for the support of personal and institutional expenses during graduate education directed toward the Ph.D. degree in applied physical sciences. Tenable at the Department of Applied Science of the Davis Campus, and at all campuses of the University of California; California Institute of Technology; Carnegie-Mellon University; The University of Chicago; Cornell University; Courant Institute of Mathematical Sciences, New York University; Georgia Institute of Technology; Harvard University; University of Illinois at Urbana-Champaign; Massachusetts Institute of Technology; Polytechnic Institute of New York; Princeton University; Rensselaer Polytechnic Institute; Rice University; University of Rochester; Stanford University; University of Texas at Austin; Texas A & M University; Vanderbilt University; University of Washington, Seattle; and University of Wisconsin, Madison. Application deadline is November 1. Applicants should write to the Office of the Graduate Dean at these institutions, or write directly to the Hertz Foundation, P.O. Box 2230, Livermore, California 94550-0130.

Hughes Aircraft Company Fellowships. Masters, Engineer Degree, and Doctoral Fellowships are awarded on a competitive basis to qualified individuals in the Engineering Sciences for study at selected universities in the fields of electrical, mechanical, aerospace or systems engineering, computer science, mathematics, or physics. Most are awarded on a work-study basis. U.S. citizenship is required. G.P.A. must be 3.0/4.0. Write to the Hughes Aircraft Company, Corporate Fellowship Office, Technical Education Center, P.O. Box 45066, Bldg. C1/B168, Los Angeles, California 90045-0066.
Hubert H. Humphrey Doctoral Fellowships. Awards are made by the U.S. Arms Control and Disarmament Agency (ACDA) to stimulate interest in the study of arms control in universities around the country by supporting unclassified doctoral dissertation research in the field. Applicants must be U.S. citizens or nationals and must have completed all requirements for the doctorate, except the dissertation, at a U.S. college or university. (Law students are also eligible.) The stipend will be $5,000 for a 12-month period, plus applicable tuition and fees of up to $3,400 for one year. Application deadline is March 15, for the 12-month award period beginning in either September or the following January. For application materials write: Hubert H. Humphrey Fellowship Program, U.S. Arms Control and Disarmament Agency, Washington, DC 20451.

Kosciuszko Foundation. Scholarships and grants for Americans of Polish background. Application deadline is January 15. For information write to Scholarship and Exchange Programs, the Kosciuszko Foundation, 15 East 65th Street, New York, New York 10021.

Laboratory Graduate Participation. Supports full-time thesis and dissertation research at participating DOE research facilities for M.A. and Ph.D. candidates majoring in the life, physical, and social sciences; mathematics; and engineering. Applicants must be U.S. citizens who have completed all requirements for the degree except thesis or dissertation research. The annual stipend is $8,400 plus tuition and fees and additional allowances for dependents. Additional information and application materials may be obtained from University Programs Division, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, Tennessee 37830-0117.

National Research Council. Ford Foundation Predoctoral and Dissertation Fellowships for Minorities. Predoctoral and dissertation fellowships consisting of annual stipends of $10,350 and $18,000 respectively are available to minorities enrolled in research-based doctoral programs in mathematics, engineering, and other fields. The predoctoral awards also include an allowance to the awardee's university in lieu of tuition and fees. Students interested in the 1988 doctoral fellowships may obtain application materials from the Fellowship Office, National Research Council, 2101 Constitution Avenue, N.W., Washington, DC 20418. The deadline for applications is November 13, 1987.

National Science Foundation. Graduate Fellowships. Three-year awards available to citizens or nationals of the U.S. for full-time study leading to master's or doctoral degrees in science (including mathematics). Awards made only to students who have completed less than one year of graduate study. Stipends of $12,300 for a 12-month tenure. No dependency allowances. Education allowance paid to fellowship institution. Application deadline November 13. Further information and application materials may be obtained from the Fellowship Office, National Research Council, 2101 Constitution Avenue, Washington, DC 20418.

National Science Foundation. Minority Graduate Fellowships. Awarded for study or work leading to the master's or doctoral degrees, these fellowships are granted for periods of three years. They are open to U.S. citizens or nationals who are members of an ethnic minority group underrepresented in the advanced levels of the U.S. science personnel pool, i.e., American Indian, Native Alaskan (Eskimo or Aleut), Black, Hispanic, or Native Pacific Islander (Polynesian or Micronesian). The stipend is $12,300 for 12-month tenures. No dependency allowances. Education allowance paid to fellowship institution. The deadline for applications is November 13. Application materials may be obtained from the Fellowship Office, National Research Council, 2101 Constitution Avenue, Washington, DC 20418.

Office of Naval Research. Graduate Fellowship Program. ONR will award up to 50 thirty-six month fellowships for study and research at U.S. institutions offering doctoral degrees in specified engineering science and engineering disciplines. Participants must be U.S. citizens and receive a baccalaureate degree in 1988. Fellows selected in 1988 will receive $14,750 for the first year of tenure. ONR will pay the institution full tuition and fees and provide $2,000 to the Fellow's department. ONR Fellowships awarded in this seventh year of the sixth program will be for study and research in ten major disciplines: Electrical Engineering, Computer Science, Naval Architecture and Ocean Engineering, Materials Science, Applied Physics, Aerospace/Mechanical Engineering, Biological/Biomedical Sciences, Cognitive/Neural Sciences, Mathematics, and Secretary of the Navy Fellowships in Oceanography. Deadline for applications is 1 February 1988. Application materials may be obtained from the American Society for Engineering Education (ASEE), 11 Dupont Circle, Suite 200, Washington, DC 20036 (202-745-3616 or 202-293-7080).

Purdue University. Purdue University Fellowships, Black Fellowships and Ethnic Minorities Fellowships. The stipend is $9,000 for twelve months with tuition and fees remitted except for $160 per semester. Black and Minorities fellowships are renewable. Some University fellowships are renewable upon resubmission to competition. Fellows may hold additional University employment up to one-quarter
time, as teaching or research assistants. Teaching Fellowships: The stipend is at least $10,000 for two semesters, with tuition and fees remitted except for $160 per semester. Fellows usually teach four hours per week and fellowships are renewable. For application forms and information, write to Graduate Office, Department of Mathematics, Mathematical Sciences Building, Purdue University, West Lafayette, IN 47907.

Sigma Delta Epsilon, Graduate Women in Science. Awards are available on a competitive basis to those who hold a degree from a recognized institution of higher learning in one of the mathematical, physical or biological sciences and are currently involved in research or have an approved research proposal. Appointments will be made irrespective of race, nationality, creed or age. Applications from women are especially encouraged. Two types of awards are available: Eloise Gerry Fellowship ($1,500 - $4,000, funds vary from year to year, not to be used for a degree program, deadline for applications and credentials December 1), and Grants-in-Aid ($750, predoctoral only, deadline February 1). Announcement of awards will be made by the following July 1. Further information and application forms may be obtained from Sigma Delta Epsilon, Graduate Women in Science, Inc., P.O. Box 4748, Ithaca, NY 14852. An individual may apply for only one of the two awards. Please indicate to which type of award your inquiry is addressed.

University of Massachusetts. Sabbatical Lectureships. Available in the Department of Mathematics and Statistics, these lectureships are open to faculty members of colleges or universities without a Ph.D. program in mathematics and/or statistics, who wish to spend their sabbatical leaves at the University of Massachusetts. Applicants should generally have a master’s degree, will be required to teach one course per semester, and will be expected to enroll in one or two courses and a seminar. Stipends are available; tuition will be waived. For further information, write to Professor M. K. Bennett, Director, Sabbatical Lectureship Program, Department of Mathematics and Statistics, University of Massachusetts, Amherst, Massachusetts 01003.

Postdoctoral Support

Air Force Office of Scientific Research. Research Contracts and Grants. Mathematicians and computer scientists are encouraged to submit proposals through their organizations for research support. Research areas include mathematics of dynamics and control, mathematics of computation, mathematics of physical, chemical or biological systems, mathematics of communication and signal processing, mathematical optimization, applied analysis, finite mathematics, probability and statistics, general computer science, and artificial intelligence. Research proposals should be forwarded to the Director of Mathematical and Information Sciences, Air Force Office of Scientific Research, Bolling AFB, Washington, DC 20332.

American Association for the Advancement of Science. Science, Engineering and Diplomacy Fellowships. One-year fellowships are available for work as staff officers in the State Department and in the Agency for International Development. The Fellow must demonstrate exceptional competence in some area of science or engineering, be flexible, and have a strong interest or some experience in applying knowledge toward the solution of problems in the area of foreign affairs. A secret security clearance must be obtained after selection. Salaries are at the GS11 or GS12 level depending upon education and experience. Deadline for receipt of applications is January 15. For application materials and more specific information on assignment possibilities write to Science, Engineering and Diplomacy Fellows Program, AAAS, 1333 H Street, N.W., Washington, DC 20005.

American Mathematical Society Centennial Research Fellowships. Postdoctoral Fellowships. These fellowships are open to individuals five to ten years past the Ph.D. degree (or equivalent), regardless of age, but below the academic rank of professor. Applicants should have received the Ph.D. degree between January 1, 1978, and December 31, 1983. Moreover, the vita must include the equivalent of at least three full years postdoctoral teaching or industrial experience, i.e., non-fellowship years. The stipend has been set by the Trustees of the Society at $30,000 for nine months of full-time research or its equivalent. In addition, there will be an expense allowance of $1,000. Applicants must be citizens or permanent residents of a country in North America. Fellowships may be held at any institution the Fellow selects or at more than one in succession. There is flexibility in the choice of time interval(s) and manner in which the Fellow may draw funds. For instance, given the opportunity, a Fellow may elect to hold a half-time academic appointment with a teaching responsibility not exceeding one course per term while holding the fellowship at one-half stipend over a two-year period. The Fellow should consult with the Secretary of the Society to learn whether the arrangement proposed is acceptable to the Society. The number of fellowships to be awarded is small and depends on the amount of money contributed to
the program. The Trustees have arranged the matching program from general funds in such fashion that funds for at least one fellowship are guaranteed. In recent years, it has not been financially possible to award more than one or two fellowships. The deadline for receipt of applications is December 1, 1987. Awards will be announced in February 1988, or earlier if possible. For application forms, write to William J. LeVaque, Executive Director, American Mathematical Society, P.O. Box 6248, Providence, Rhode Island 02940. (It should be noted that completed application and reference forms should NOT be sent to this address, but to the address given on the forms.)

American Philosophical Society. Postdoctoral research grants averaging $2,000 for candidates with Ph.D. or equivalent to aid specific research projects. Grants contribute toward travel expenses, food and lodging, photoduplication, and some other research costs. Tenable abroad and in U.S. The Committee on Research meets by end of February, April, June, October, and December. Respective deadlines for application and all supporting material are December 1, February 1, April 1, August 1, and October 1. For information write to Committee on Research, American Philosophical Society, 104 South Fifth Street, Philadelphia, Pennsylvania 19106.

American Society for Engineering Education. NASA-ASEE Summer Faculty Fellowships. Programs in science and engineering research in collaboration with the National Aeronautics and Space Administration research centers; for U.S. citizens who are faculty or research members of institutions of higher education. Stipends will be $800/week for ten weeks, plus travel allowance. Application deadline is February 1. For published announcement write to NASA-ASEE Summer Faculty Fellowships, American Society for Engineering Education, Suite 200, Eleven Dupont Circle, N.W., Washington, DC 20036.

American Society for Engineering Education. Navy-ASEE Summer Faculty Research Programs. Programs in science and engineering research at the laboratories and R&D centers of the Navy; for U.S. citizens who are faculty or research members of institutions of higher education. Stipends will be $800/week, plus travel and relocation allowances. Application deadline is January 26. For a program announcement write to American Society for Engineering Education, Suite 200, Eleven Dupont Circle, N.W., Washington, DC 20036.

Argonne National Laboratory. Predoctoral, postdoctoral, and visiting scientist appointments in mathematics and computer science with an emphasis on applied analysis, numerical mathematics, automated program transformation, and automated theorem proving. Of particular interest: parallel algorithms and software for advanced-architecture computers; variety of multiprocessors in Argonne's Advanced Computing Research Facility available for use in research. Summer appointments at undergraduate through visiting scientist levels. Information: Hans Kaper, Acting Division Director, Mathematics and Computer Science Division, Argonne National Laboratory, Argonne, Illinois 60439.

R H Bing Faculty Fellowships. Two Fellowships will be available at The University of Texas at Austin with terms beginning September 1, 1988. Each Fellow will hold an Instructorship in the Mathematics Department, with a teaching load of two courses in the fall and one course in the spring. The beginning salary will be $32,000 with a travel supplement of $1,000 per year. The Fellowships are not renewable after three years. Applicants must show outstanding promise in research, and preference will be given to those having doctorates conferred in 1987 or 1988. There are no restrictions on applicants' fields of interest. To apply, send a vita and have three letters of recommendation submitted by January 1, 1988, to R H Bing Faculty Fellowships, Department of Mathematics, The University of Texas, Austin, Texas 78712.

Bowling Green State University. Post-doctoral Lectureship (Anticipated). Bowling Green offers a lectureship for the academic year to promising mathematicians and statisticians of any age with a recent Ph.D. The candidate's research interests should supplement those of the departmental faculty. The appointee is expected to participate in seminar activity and teach one calculus course per semester for a compensation of $18,000 for the academic year. Interested persons should send a vita, an official copy of graduate transcripts, and arrange for three letters of reference to: Hassoon S. Al-Amiri, Chair, Department of Mathematics and Statistics, Bowling Green State University, Bowling Green, Ohio 43403. Bowling Green State University is an Equal Opportunity/Affirmative Action Employer.

Brown University. Jacob David Tamarkin Assistant Professorship. Three-year appointment, beginning July 1, 1988. Competitive salary. Teaching load: two courses per semester (6 hours per week). Applicants (regardless of age) should have received Ph.D. before the start of the appointment but no earlier than January 1, 1986. Applicants should have strong research potential and a commitment to teaching. Field of research interest will be taken into account. A curriculum vitae, a completed
application form, and three letters of recommendation should be received by January 1, 1988. Requests for application forms and all other inquiries should be addressed to Tamarkin Search Committee, Department of Mathematics. Brown University is an Equal Opportunity/Affirmative Action Employer.

**The Bunting Institute of Radcliffe College. Science Scholar Fellowships.** The Bunting Institute provides fellowships to postdoctoral scientists to work on projects that will make a contribution to their fields and advance their careers. Open to women scientists in the fields of physical, mathematical, psychological and biological sciences and engineering. Office and laboratory space; stipend $20,000 plus research expenses; one- or two-year appointment; access to Harvard/Radcliffe libraries and facilities. Deadline for applications is October 15, 1987. Write or call for application and information to: Science Scholar Fellowship Program, The Bunting Institute of Radcliffe College, 34 Concord Avenue, Cambridge, Massachusetts 02138 (617-495-8212). Deadline for fellowship programs for 1989-1990 will be October 1, 1988.

**California Institute of Technology. Division Research Fellowship.** The Division of Physics, Mathematics, and Astronomy will offer a three-year Research Fellowship in Mathematics to begin in the fall of 1988. The annual salary will be $30,000 per year plus a $1,000 per year research fund. Fellows will be expected to engage in research; there will be no teaching responsibilities. The Fellowship is open to men and women who have recently received their doctorate in mathematics. Requests for application should be sent to D. B. Wales, Professor and Executive Officer for Mathematics, California Institute of Technology, 253-37 Sloan Laboratory, Pasadena, CA 91125. Please send applications by January 1, 1988, if possible.

**California Institute of Technology. Harry Bateman Research Instructorships.** Offered by Mathematics at the California Institute of Technology. Normally open to men and women (of any age) who have recently received their doctorate in mathematics. Appointments are for one year and are renewable for one additional year. The annual salary will be $29,000. Duties include teaching one course for the full academic year. Please send applications by January 1 if possible. Inquiries or requests for application forms should be addressed to Professor D. B. Wales, Professor and Executive Officer for Mathematics, 253-37 Sloan Laboratory, Pasadena, California 91125. Caltech is an Equal Opportunity Employer. Women and minorities are encouraged to apply.

**Cornell University. Possible H. C. Wang Assistant Professorship.** During the first year the holder of a Wang Assistant Professorship will have a teaching load of two courses in the first semester and one in the second; thereafter, it will be two courses per semester. Salary $30,000. The Assistant Professorship is nonrenewable after a three-year term. Applications and letters of reference should be addressed to Chairman, Department of Mathematics, Cornell University, Ithaca, New York 14853.

**Courant Institute. Instructorships in Mathematics.** Open to mathematicians (of any age) who are recent recipients of doctoral degrees and who show strong promise in research. The teaching duty will consist of one course each term. Appointments are for two years. The academic salary for nine months will be at least $31,000. In addition, the Courant Institute may be able to offer support for research in residence during two summer months. (When longer term faculty positions are available, applicants for Instructorships will also be considered for them.) Inquiries and requests for application forms should be addressed to the Committee on Instructorships and Visiting Memberships, Courant Institute of Mathematical Sciences, New York University, 251 Mercer Street, New York, New York 10012. Applications should be filed no later than January 1, 1988. N.Y.U. is an Equal Opportunity/Affirmative Action Employer.

**Courant Institute. Postdoctoral Visiting Memberships.** The Courant Institute of Mathematical Sciences of New York University offers postdoctoral Visiting Memberships to mathematicians, scientists and engineers who are interested in its program of training and research in a broad range of pure and applied mathematics. Applications for the academic year 1988-1989 must be submitted before January 1, 1988. Inquiries and requests for application forms should be addressed to the Committee on Instructorships and Visiting Memberships, Courant Institute of Mathematical Sciences, New York University, 251 Mercer Street, New York, New York 10012. N.Y.U. is an Equal Opportunity/ Affirmative Action Employer.

**Dartmouth College. John Wesley Young Research Instructorships.** Two instructorships are normally awarded by Dartmouth College each year. Teaching duties are one course for two quarters and two courses for one quarter (or two courses for two quarters) and are of a varied and nonroutine nature. The academic-year salary of $27,000 is supplemented by a two-month resident research stipend of $6,000. Appointments are for two years and are not renewable. Applicants should write to Department of
Fulbright Scholar Awards. The Fulbright Scholar Awards for 1988-1989 include 300 grants in research and 700 grants in university lecturing for periods ranging from three months to a full academic year. There are openings in over 100 countries with some opportunity for multi-country research. Fulbright Awards are granted in virtually all disciplines. Scholars in all academic ranks, retired faculty and independent scholars are eligible to apply. Benefits include round-trip travel; maintenance allowance to cover living costs of grantee and family; and other supplemental allowances. Basic eligibility requirements are U.S. citizenship; Ph.D. or comparable professional qualifications; university or college teaching experience; and, for selected assignments, proficiency in a foreign language. Application deadlines vary. For more information and applications, call or write Council for International Exchange of Scholars, Eleven Dupont Circle N.W., Washington, DC 20036-1257 (202-939-5401).

John Simon Guggenheim Memorial Foundation Fellowships. Fellows are usually between thirty and forty-five years of age, but the Committee of Selection also is empowered to nominate persons older than forty-five and younger than thirty. Fellowships are on an advanced professional level. U.S. or Canadian citizenship or permanent residence is required. Fellowships are also offered to citizens or permanent residents of all countries and territories of the Western Hemisphere and the Philippines. Application deadline: October 1 for the U.S. and Canada competition; December 1 for the Western Hemisphere and Philippines competition. Approximately 300 awards are made, averaging approximately $23,000 in 1987. For more information write to John Simon Guggenheim Memorial Foundation, 90 Park Avenue, New York, New York 10016.

Harvard University. Benjamin Peirce Lectureships. Rank of Assistant Professor. The appointments are for three years with a starting salary of approximately $29,100 (for the nine-month academic year) which can be augmented by teaching in the summer school or by work on a research contract if funds are available. The teaching commitment is six hours per week of lectures including a half course on any topic of the lecturer's choice. Application forms may be obtained by writing to: Benjamin Peirce Lectureships, Department of Mathematics, Harvard University, One Oxford Street, Cambridge, Massachusetts 02138. Applications must be filed by January 1, 1988. Harvard is an Equal Opportunity/Affirmative Action Employer, and particularly encourages applications from women and minority candidates.

IBM Thomas J. Watson Research Center. Mathematical Sciences Department Postdoctoral and Junior Faculty Research Fellowships. These fellowships provide an opportunity for scientists of outstanding ability to pursue their own research interests in pure or applied mathematics while interacting closely with Department members in an atmosphere in which basic research is combined with exposure to technical problems arising in a mathematically oriented industry. Candidates (of any age) must have no more than five years of postdoctoral professional experience when the fellowship commences. Fellowships have a period of one year, extendable to two years depending on mutual interest in continuation. The stipend will be generally in the range of $48,000 to $53,000 per year, depending on experience. To apply, submit the following by December 15, 1987: résumé; thesis summary; thesis or reprints of publications based on thesis, if available; bibliography with reprints of principal papers; research proposal containing an abstract of approximately 200 words for the period of the fellowship; and three or more letters of reference, including one from your thesis adviser. The letters of reference may arrive separately, but must be received by the above date. Résumé must list applicant's country of citizenship. Direct all material to Committee on Postdoctoral Fellowships, Department of Mathematical Sciences, IBM Research Center, Post Office Box 218, Yorktown Heights, New York 10598. Applicants will be notified individually as soon as the Committee has reached a decision on the application. The Research Center is located in Westchester County about thirty miles north of New York City.

Indiana University, Bloomington. Václav Hlavaty Research Assistant Professorships. The Mathematics Department at Indiana University expects to receive funding for at least one position at this level, offered to mathematicians with doctorates who show definite promise in research. The appointment is for three years with a salary competitive with similar positions at other institutions. The teaching duties during the first academic year will involve three hours per week and during the next two academic years will
involve six hours per week. The salary may be supplemented by either teaching or research contracts during the summer months. There will also be an allowance available for professional expenses, such as travel to meetings, supplies, publication costs, etc. Inquiries or requests for application forms should be addressed to John Ewing, Chairman, Department of Mathematics, Swain Hall East, Indiana University, Bloomington, Indiana 47405. Preference will be given to applications received before January 1, 1988. Affirmative Action Employer.

**Institute for Advanced Study Memberships.** The School of Mathematics will grant a limited number of memberships, some with financial support, for research in mathematics at the Institute during the academic year 1988-1989. Candidates must have given evidence of ability in research comparable at least with that expected for the Ph.D. degree. Application blanks may be obtained from the Administrative Officer of the School of Mathematics, Institute for Advanced Study, Princeton, New Jersey 08540, and should be returned (whether or not funds are expected from some other source) by December 31, 1987. An Equal Opportunity/Affirmative Action Employer.

**Institute for Computer Applications in Science and Engineering (ICASE).** A limited number of visiting appointments are available for both junior- and senior-level researchers at the Institute for Computer Applications in Science and Engineering (ICASE) which is operated by Universities Space Research Association. ICASE serves as a center for interaction between Langley Research Center staff and the academic community in the areas of applied and numerical mathematics, applied computer science, and development of mathematical models in a variety of application areas. Applications for partial support while on sabbatical leave are encouraged, as are applications from Ph.D.’s for two-year renewal appointments. Inquiries should be addressed to the Director, ICASE, Mail Stop 132C, NASA Langley Research Center, Hampton, Virginia 23665. An Equal Opportunity Employer.

**Institute for Mathematics and its Applications.** Postdoctoral Memberships. The IMA will award about a dozen 12-month research memberships with starting dates July through September 1988. The postdoctoral terms will include the academic year program on Nonlinear Waves, September 16, 1988 to June 30, 1989, (and overlap programs on Signal Processing in summer 1988 and Statistics in summer 1989). All requirements for a doctorate should be completed by September 15, 1988. Applicants must show evidence of mathematical excellence, but they do not need to be specialists in Nonlinear Waves or even “applied mathematicians”. The following materials must be submitted: (1) personal statement of scientific interest, research plans and reasons for wishing to participate in the program. (This is an essential part of the application.) (2) Curriculum vitae and a list of publications. (3) Three letters of recommendation, to be sent directly to the IMA. All material should arrive by January 15, 1988. Senior memberships are also available. Preference will be given to supplementary support for persons with sabbatical leaves, fellowships, or other stipends. All correspondence should be sent to: Visiting Membership Committee, Institute for Mathematics and its Applications, University of Minnesota, 514 Vincent Hall, 206 Church Street, S.E., Minneapolis, MN 55455-0436 U.S.A. The University of Minnesota is an equal opportunity educator and employer and specifically invites and encourages applications from women and minorities.

**Lawrence Livermore National Laboratory.** Postdoctoral research appointments and graduate research assistantships. Areas of special interest include development of computer systems, computer graphics, numerical analysis, and programming science. U.S. citizenship required. Inquiries should be directed to Robert E. Huddleston (L-61), Computation Department, Lawrence Livermore National Laboratory, University of California, Livermore, California 94550.

**Los Alamos National Laboratory.** Research opportunities in computer science, natural sciences, engineering, applied mathematics, and physics. A limited number of postdoctoral appointments is available for one year, subject to renewal for a second year. Los Alamos National Laboratory is an Equal Opportunity Employer. Write to Carol Rich, Mail Stop P-290, Los Alamos National Laboratory, Los Alamos, New Mexico 87545.

**Los Alamos National Laboratory.** *J. Robert Oppenheimer Research Fellowship.* Candidates must be recipients of a doctorate in the physical sciences, natural sciences, mathematics or engineering, and must show clear and definite promise of becoming outstanding leaders in scientific research. Two- to three-year appointments; salary: $48,240/year; application deadline: mid-November each year. For additional information write to Carol Rich, Mail Stop P-290, Los Alamos National Laboratory, Los Alamos, New Mexico 87545. An Affirmative Action/Equal Opportunity Employer.

**Massachusetts Institute of Technology.** *C. L. E. Moore Instructorships in Mathematics.* Offered by the Department of Mathematics at the Massachusetts Institute of Technology. Open to mathematicians.
with doctorates who show definite promise in research. The base salary will be at least $28,500, and the teaching load is six hours per week in one semester and three hours per week in the other. Appointments are for one year and are renewable for one additional year. Applicants please send (a) a vita; (b) a description of the research in your thesis and other work you have done (1-3 pages); and (c) the research which you plan for next year. Application should be sent, by December 31 if possible, to the Department of Mathematics, Room 2-263, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139. M.I.T. is an Equal Opportunity Employer.

Mathematical Sciences Research Institute. The Institute will award about 20 yearlong research fellowships with starting date August or September 1988 for new and recent Ph.D.'s. The stipend will be at least $30,000. The year 1988-1989 features combinatorial group theory and symplectic geometry but some awards will be made in other areas, so applications from candidates in all fields are welcome. Formal application forms are not used, but a sheet giving suggestions on how to apply is available on request. Write to the Mathematical Sciences Research Institute, 1000 Centennial Drive, Berkeley, California 94720. Files must be complete by December 15, 1987.

National Center for Atmospheric Research. Advanced Study Program. Postdoctoral Fellowships are offered for highly qualified atmospheric scientists, and scientists from related disciplines, who wish to continue basic research in the atmospheric sciences. Appointments are for a one-year period with a possible extension for an additional year. Stipends are $24,000 for recent recipients of the Ph.D. and are adjusted annually in June. The application deadline is January 15. Inquiries should be sent to Director, Advanced Study Program, NCAR, P.O. Box 3000, Boulder, Colorado 80307.

National Research Council. Ford Foundation Postdoctoral Fellowships for Minorities. Administered by the National Research Council, these fellowships are sponsored by the Ford Foundation. Applicants must be U.S. citizens who are members of one of the designated minority groups: American Indians and Alaskan Natives (Eskimo or Aleut), Black Americans, Mexican Americans/Chicanos, Native Pacific Islanders (Micronesians and Polynesians), or Puerto Ricans, who are engaged in college or university teaching, and hold a doctoral degree. Tenure of the one-year fellowship provides postdoctoral research experience at an appropriate nonprofit institution of the Fellow's choice. The deadline for the submission of applications is January 15, 1988. Further information and application materials may be obtained from the Fellowship Office, National Research Council, 2101 Constitution Avenue, N.W., Washington, DC 20418.

National Research Council. Research Associateship Programs. These programs provide scientists and engineers opportunities for postdoctoral research, free from administrative duties, in a variety of scientific disciplines and fields of specialization. The programs are conducted in cooperation with selected federal organizations with laboratories at approximately one hundred geographic locations in the United States. Most programs are open to senior investigators as well as recent Ph.D.'s. Most are also open to foreign nationals as well as U.S. citizens. Applications for these competitive awards will be received by the National Research Council until January 15, 1988, December 15, 1987 for NASA awards. Appointments will be made in the spring. In some programs additional deadlines are April 15 and August 15 with awards announced in July and November respectively. Annual stipends range from $26,350 to $35,000, depending on laboratory of application. Further information and application materials can be obtained from Associateship Programs (GF1/4-D3), National Research Council, 2101 Constitution Avenue, N.W., Washington, DC 20418.

National Science Foundation. Computer Science Research. Grants support research concerned with such topics as theoretical foundations of computer science, software systems science, software engineering, numeric and symbolic computation, and computer systems architecture. Guidelines on eligibility and proposal preparation are available in "Grants for Scientific and Engineering Research." For this brochure and additional information write: Division of Computer and Computational Research, National Science Foundation, 1800 G Street, N.W., Washington, DC 20550.

National Science Foundation. Mathematical Sciences Postdoctoral Research Fellowships. (With Research Instructorship Option). The format of the 1988 Fellowship program has not been significantly changed from that of 1987. The stipend portion of the awards will consist of support for two nine-month academic years and six summer months, for a total of 24 months of support. The awardee will have two options for the academic years' stipend: as full-time support for any eighteen academic-year months in a three-year period, in intervals not shorter than three consecutive months (the Research Fellowship Option), or as a combination of full-time and half-time support over a period of three academic years, usually as one academic year full-time and two academic years half-time (the Research Instructorship Option). The stipend will be paid at the rate of $2,750 per full-time month or $1,375 per half-time
month, for a total of $66,000 for the eighteen academic months and six summer months. Deadline for applications is November 16, 1987; awards will be announced on or about February 15, 1988. For further details write to Special Projects Program, Room 339, Division of Mathematical Sciences, National Science Foundation, Washington, DC 20550.

OTA Congressional Fellowship Program. The Office of Technology Assessment is seeking qualified candidates from academia, private industry, and the public sector for its Congressional Fellowship Program. Up to six Fellows will be selected for a 1-year appointment in Washington, DC beginning in September 1988. The program is open to men and women of all disciplines who have demonstrated exceptional competency in the physical or biological sciences, engineering, law, economics, environmental and social sciences, or public policy. Candidates must have completed research and training at the doctoral level, or have equivalent experience. Salaries will range from $27,000-$45,000 per year, based on the Fellow’s current salary and/or training and experience. In some instances a Fellow may accept a salary supplement from his or her parent institution. For application information contact Congressional Fellowships, Personnel Office, Office of Technology Assessment, Congress of the United States, Washington, DC 20510.

Purdue University. Research Assistant Professorship. These positions are intended for recent Ph.D.’s who can benefit from and contribute to an active research environment. Appointments are for the two academic years 1988-1990, and are nonrenewable. The normal teaching load is two courses per semester; there will be a one course reduction during the spring semester of 1989. Advanced courses are encouraged; the Department presently has 150 graduate students. The beginning academic year salary will be $31,000. In addition, a stipend of $6,200 will be available for research in residence during the summer of 1989. Candidates are expected to have a Ph.D. degree in mathematics prior to September 1988. Selection will be based primarily on outstanding research potential in an area where some interaction with present faculty seems likely. Applications, including a vita, brief description of research interests, and three letters of recommendation, should be sent to Joseph Lipman, Head, Department of Mathematics, Purdue University, West Lafayette, Indiana 47907. The deadline for applications is January 15, 1988.

Rice University. Griffith Conrad Evans Instructorships. Postdoctoral appointments for two to three years for promising research mathematicians with research interests in common with the active research areas at Rice. Applications should be in by 15 January 1988. Rice University is an Equal Opportunity/Affirmative Action Employer. Inquiries and applications should be addressed to Chairman, Evans Committee, Department of Mathematics, Rice University, Box 1892, Houston, Texas 77251.

Rutgers University. Hill Assistant Professorships. Offered for 1988-1989 by the Department of Mathematics at Rutgers, The State University of New Jersey, New Brunswick, to men and women of any age who will have received their Ph.D. by June 30, 1988, and who show definite promise in research in pure or applied mathematics. Applications from members of minority groups are welcome. Appointments are for three years. The starting salary will be competitive. Inquiries and applications should be addressed to Joseph D’Atri, Chairman, Department of Mathematics, Rutgers University, New Brunswick, New Jersey 08903. Applications received after January 15, 1988 may not receive full consideration.

Sloan Foundation. Research Fellowships. Unrestricted grants made to selected university scientists in the physical sciences, mathematics, applied mathematics, economics, and in neuroscience. Candidates must be members of the regular faculty, though not necessarily in a tenured position, at a recognized college or university in the United States or Canada. Candidates do not apply but are nominated by their department chairmen or other scientists. For information write to the Sloan Research Fellowships, Alfred P. Sloan Foundation, 630 Fifth Avenue, New York, New York 10111.

U.S. Department of Energy (DOE). Special University-Laboratory Cooperation. Participants engage in laboratory-approved projects in a program designed to increase the interactions and flow of information between universities and DOE laboratories. Included is research in applied mathematics and computer science. Inquiries should be addressed to the Director at any of the following organizations: Associated Western Universities, 142 East 200 South (Suite 200), Salt Lake City, Utah 84111; Argonne Division of Education Programs, 9700 South Cass Avenue, Argonne, Illinois 60439; Brookhaven National Laboratory, Upton, New York 11973; Northwest College and University Association for Science (NORCUS), 100 Sprout Road, Richland, Washington 99352; Oak Ridge Associated Universities, Oak Ridge, Tennessee 37830.
U.S. Department of Health and Human Services, National Institutes of Health, supports postdoctoral training in specified areas of biomedical and behavioral research. Applicant must have earned an appropriate degree and arranged for appointment to an institution and acceptance by a sponsor who will supervise the training research experience. U.S. citizenship or lawful admittance to the U.S. for permanent residence is required. Announcements and application kits available from Office of Grants Inquiries, Division of Research Grants, National Institutes of Health, Bethesda, Maryland 20892. An enclosed self-addressed gummed mailing label will expedite handling.

University of California, Los Angeles. Earle Raymond Hedrick Assistant Professorships in Mathematics. The Department of Mathematics, University of California, Los Angeles, will make three appointments for the year 1988-1989. These awards will be made to mathematicians with Ph.D.’s who show strong promise in research. The appointment will be for three years, at an annual salary of $35,500 in the first year. The teaching load will be three hours per week for two quarters and six hours per week for one quarter. One course may be an advanced course in the candidate’s research area. Requests for application forms should be sent to the Chairman, Department of Mathematics, University of California, 405 Hilgard Avenue, Los Angeles, California 90024-1555. The deadline for applications is January 1, 1988. UCLA is an Equal Opportunity/Affirmative Action Employer.

University of Chicago. Assistant Professorships and Leonard Eugene Dickson Instructorships in Mathematics. The Dickson Instructorships are intended for new or recent Ph.D.’s. Appointment is for two years with an annual salary of at least $30,000. The Assistant Professorships are intended for people with two or more years of postdoctoral experience. Appointment is for three years with an annual salary of at least $33,000. In both positions, the teaching load is four one-quarter courses per year. Application deadline is January 1, 1988. Further information and application forms may be obtained from the Appointments Secretary, Department of Mathematics, University of Chicago, 5734 S. University Avenue, Chicago, Illinois 60637.

University of Cincinnati. Charles Phelps Taft Postdoctoral Fellowships. These fellowships are intended to afford scholars who have demonstrated unusual ability for creative research the opportunity to enhance their education through additional study and research. Applicants must have been awarded the Ph.D. degree during the past five years or have completed all degree requirements by September 1 of the year in which the tenure will begin. Applications must include a research plan and the name of a University of Cincinnati faculty member, if known, with whom the applicant would like to study. Ten departments, including the Department of Mathematical Sciences, compete for three awards. Tenure is for one academic year and involves no teaching duties; however, teaching is allowed for additional compensation. Inquiries should be sent to the University Dean for Graduate Education and Research, Mail Location 627, University of Cincinnati, Cincinnati, Ohio 45221. The deadline for the complete application is February 1.

University of Michigan, Ann Arbor. T. H. Hildebrandt Research Assistant Professorships. Designed to provide mathematicians with favorable circumstances for the development of their research talents. Preference is given to persons of any age having their Ph.D. less than two years. Teaching load averages one and one-half courses per semester. The stipend for the academic year 1988-1989 will be competitive and determined later; there is a good possibility of additional income during the summer. Appointment is for three years. NSF postdoctoral fellowships may be held simultaneously with a further reduction in teaching load. Applicants should submit completed application form and request at least three letters of recommendation. Letters should contain comments on applicant’s mathematical promise, teaching ability, and personality. First preference will be given to applications completed, and supported by three or more letters, prior to January 6. Appointments will be announced by the middle of February. Applications should be made to D. J. Lewis, Chairman, Department of Mathematics, University of Michigan, Ann Arbor, Michigan 48109-1003. Affirmative Action Employer.

University of Pennsylvania. Hans Rademacher Instructorship. This new post-doctoral position has been instituted in the Mathematics Department in honor of Hans Rademacher, a member of the department from 1934 to 1962. Appointment will be for two years, beginning July 1, 1988. Applicants should have received a Ph.D. in mathematics before start of the appointment, but no earlier than 1986, and are expected to show promise of significant accomplishment. The position carries a reduced academic year teaching load. Beginning salary will be at least $30,000 and there is an additional discretionary research fund of $1,500. A letter of application, curriculum vitae, publications, and three letters of recommendation should be received by January 11, 1988. Write to: Personnel Committee, Department of Mathematics, University of Pennsylvania, Philadelphia, Pennsylvania 19104-6395. The University of Pennsylvania is an Equal Opportunity/Affirmative Action Employer.
University of Pittsburgh. *Andrew Mellon Postdoctoral Fellowships.* Intended to support the research and foster the professional development of scholars who give promise of achieving distinction in their fields. Applicants should submit a completed application form, a research proposal, three to ten pages long, a list of publications, and three letters of recommendation by January 15. The Fellows are expected to be in residence at the University of Pittsburgh and to engage in research during their period of appointment; they have no other formal responsibilities. Preference will be given to applicants who have completed all doctoral degree requirements by January 15. A basic stipend of $19,000 for eleven months, plus an allowance for traveling expenses (up to $200) and incidental costs (not to exceed $200), make up the award. Nine-month appointments are available for a stipend of $15,500. Applications may be obtained from the Director of Graduate Programs, Faculty of Arts and Sciences, University of Pittsburgh, Pittsburgh, Pennsylvania 15260.

University of Utah. *Instructorship in Mathematics.* Two or more nonrenewable 3-year instructorships are offered. Persons of any age receiving Ph.D. degrees in 1987 or 1988 are eligible. Applicants will be selected on the basis of ability and potential in teaching and research. Starting salary this year is $27,000 and cost of living increases are contingent on action by the State Legislature. Duties consist of teaching two courses through the academic year. Applications must include curriculum vitae, bibliography, three letters of reference, abstract of thesis, and list of graduate courses completed or transcripts. Please send your application to Instructorship Committee, Department of Mathematics, University of Utah, Salt Lake City, Utah 84112. Applications will be accepted until February 28, 1988, or until the positions are filled.

University of Wisconsin, Madison. *Van Vleck Assistant Professorship in Mathematics.* Applications are invited from outstanding mathematicians (of any age) who are recent recipients of a doctorate. People are sought who will interact well with members of the department, who care about teaching, and who can contribute to the research and instructional programs. The regular teaching load is two courses per semester, with at least one in the applicant's specialty every other year. There is a high probability of additional income through research or teaching during summers between consecutive years of appointment. The salary will be dependent on experience and will be at least $28,500 per academic year. All positions are for specified three-year terms. Deadline for applications is December 31, 1987. Application forms may be obtained from Hiring Committee, 223 Van Vleck Hall, Department of Mathematics, University of Wisconsin-Madison, 480 Lincoln Drive, Madison, Wisconsin 53706.

Yale University. *Josiah Willard Gibbs Instructorships.* Offered to men and women with the doctorate who show definite promise in research in pure mathematics. Applications from women and members of minority groups are welcome. Appointments are for two years. The 1987-1988 salary is $30,000; an increase is expected for 1988-1989. The teaching load is kept light to allow ample time for research. If desired, part of the teaching duties may consist of a one-semester course at the graduate level in the general area of the instructor's research. Inquiries and applications should be addressed to the Gibbs Committee, Department of Mathematics, Yale University, Box 2155 Yale Station, New Haven, Connecticut 06520. Preference will be given to applications received before February 1988.

**Travel and Study Abroad**

**The African-American Institute.** Seeks to further African development and to strengthen understanding between the United States and Africa. For information about the several programs write the African-American Institute program representatives in twenty-two African countries, relevant African ministries or universities, or the Division of Education, African-American Institute, 833 United Nations Plaza, New York, New York 10017.

**American-Scandinavian Foundation.** Fellowships for study or research in Scandinavia (Denmark, Finland, Iceland, Norway, and Sweden). Applicants must be U.S. citizens or permanent residents and have completed their undergraduate education by the time the overseas project is to begin. Necessary language competence, financial need, and merit in pursuing the study program in Scandinavia are considered in making these awards. The deadline for completed applications is November 1. Write to the Exchange Division, The American-Scandinavian Foundation, 127 East 73rd Street, New York, New York 10021.

**Centro de Investigacion del IPN.** *Solomon Lefschetz Research Instructorships.* Offered to mathematicians with doctorates who show definite promise in research. Appointments are for one year, with possibility of renewal for a second year, with salary equivalent to that of an Assistant Professor at the Mathematics Department. An allowance for moving expenses is also made. A knowledge of Spanish is desirable, but
not necessary. Deadline for applications is February 28. Inquiries or requests for applications should be addressed to: Lefschetz Instructorships, Mathematics Department, Centro de Investigacion del IPN, Apartado Postal 14-740, Mexico, D.F., Mexico, C.P. 07000. Phone 905-754-4466, Telex 017-72826 PPTME.

Winston Churchill Foundation. A scholarship program for graduate work in engineering, mathematics and science at Churchill College, Cambridge University. Application forms are available from representatives on campuses of colleges and universities participating in the program. For further information write to The Winston Churchill Foundation, P.O. Box 1240, Gracie Station, New York, New York 10028.

Committee on Scholarly Communication with the People's Republic of China (CSCPRC). Visiting Scholar Exchange Program. This program provides a limited number of awards for short-term research and lecture visits for American and Chinese scholars in all disciplines, including the natural and engineering sciences. Application is open to U.S. citizens and permanent residents regardless of natural origin, race, sex, or religious affiliation. Deadline is October 10, 1987. Address requests to CSCPRC, National Academy of Sciences, 2101 Constitution Ave., N.W., Washington, DC 20418.

Lady Davis Fellowship Trust. Fellowships for study and/or research at graduate or postdoctoral levels at the Hebrew University of Jerusalem and the Technion-Israel Institute of Technology, Haifa. Lady Davis Fellows will be selected on the basis of demonstrated excellence in their studies, promise of distinction in their chosen fields of specialization and qualities of mind, intellect, and character. The Fellowships are tenable for a period of one year. They may be renewed for a second year and in special circumstances extended for a third year. They are intended to defray travel and tuition fees and to meet reasonable living expenses. Deadline for completed applications is December 1, 1987. Application forms can be obtained from the Lady Davis Fellowship Trust, P.O. Box 1255, Jerusalem, Israel.

Lady Davis Visiting Professorships. Lady Davis Visiting Professorships, for periods from one semester to a full academic year, are intended for candidates with the rank of Full or Associate Professor at their own institution. Such Visiting Professors are appointed after consultation with the appropriate Faculties of the Hebrew University of Jerusalem or the Technion-Israel Institute of Technology, Haifa. The grant includes a professorial salary and cost of travel. Deadline for completed applications is December 1, 1987. Application forms can be obtained from the Lady Davis Fellowship Trust, P.O. Box 1255, Jerusalem, Israel.

Fulbright-Hays Program. Fulbright and Other Grants for Graduate Study Abroad. For graduate study or research in any field in which the project can be profitably undertaken abroad. Applicant must be a U.S. citizen, hold a B.A. degree or the equivalent, and have language proficiency sufficient to carry out the proposed study and to communicate with the host country. If an applicant is already enrolled in a U.S. university, he must apply directly to the Fulbright Program Adviser on his campus. Unenrolled students may apply to the Institute of International Education. Further details may be obtained from the U.S. Student Programs Division, Institute of International Education, 809 United Nations Plaza, New York, New York 10017.

Fulbright Program. Collaborative Research Grants. United States Government grants available in all fields for teams of two or three graduate students or recent postdoctoral researchers for research abroad. Eligibility requirements include U.S. citizenship and a sufficient proficiency in both the written and spoken language of the host country to carry out the proposed research. Deadline for completed applications is January 16, 1988. Further details may be obtained from the U.S. Student Programs Division, Institute of International Education, 809 United Nations Plaza, New York, New York 10017.

Alexander von Humboldt Foundation. Research Fellowships. Provides postdoctoral scholars with the opportunity of carrying out research at a university or other research institute within the Federal Republic of Germany incl. Berlin (West). Scholars of all nationalities and disciplines may apply. Selection is based exclusively on academic merit. Applicants must have completed their academic studies, have evidence of a degree equivalent to the doctorate (Ph.D., C.Sc., etc.), and for research in the humanities, have adequate knowledge of German. Furthermore they must present evidence of employment in independent research work at the university level, and have scholarly publications to her/his credit. Period of fellowship: 6 to 12 months (extension possible up to 24 months). Applications may be obtained from and returned directly to the Alexander von Humboldt-Stiftung, Jean-Paul-Strasse 12, D-5300 Bonn 2, Federal Republic of Germany. Additional scholarships for a German language course are available.
Indo-American Fellowship Program. Approximately 12 grants to be awarded to U.S. citizens for advanced research in India, for six- to ten-month periods during the academic year. In addition to a basic grant there are travel, dependent and research allowances. Also up to nine shorter grants (two- to three-months) for research and/or professional activity. Applications are encouraged from non-Indian specialists and for projects which include collaboration with Indian colleagues. Deadline for applications June 15 each year. For details write the Council for International Exchange of Scholars, Attention: Indo-American Fellowships Program, Eleven Dupont Circle, Washington, DC 20036.

International Research and Exchanges Board (IREX). IREX administers academic exchange programs, open to advanced graduate students, postdoctoral scholars, and faculty members in all fields of study who are United States citizens, and who are affiliated with a North American college or university. Exchange agreements are in effect with Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland, Romania, Yugoslavia, and the USSR. Placements are made for one to ten months at universities or academy institutes. For more detailed information, write to the International Research and Exchanges Board, 126 Alexander Street, Princeton, NJ 08540-7102 (609-683-9500).

Italian National Research Council Fellowships for Foreign Citizens. The Italian National Research Council announces some fellowships (maximum period one year) for foreign mathematicians. The stipend is 1,200,000 Italian lire per month, plus travel expenses to and from the country of residence. Prospective applicants may write for details to: Alessandro Figà-Talamanca, C.N.R., via Santa Marta 13A, 50139 Firenze, Italy. In their letter they should include information concerning their curriculum, their research program, and the names of the Italian mathematicians they would like to work with.

Kosciuszko Foundation. Graduate and Postgraduate Exchange with Poland. Open to U.S. citizens. Candidates must have at least a master's degree and a knowledge of the Polish language. Apply by November 15 for the following academic year. Write to Scholarship and Exchange Programs, Kosciuszko Foundation, 15 East 65th Street, New York, New York 10021.

Marshall Scholarships. Offered by the British Government to U.S. graduates; tenable at any university in the United Kingdom. Recipients of awards are required to take a degree at their British university. Fields unrestricted. Apply through British Consulates-General in the following regions: (1) Northeast: Suite 4740 Prudential Tower, Prudential Center, Boston, Massachusetts 02199; (2) Mideast: 3100 Massachusetts Avenue, N.W., Washington, DC 20008; (3) South: Suite 912, 225 Peachtree Street, N.E., Atlanta, Georgia 30303; (4) Central: 33 North Dearborn Street, Chicago, Illinois 60602; (5) Pacific: 1 Sansome Street, San Francisco, California 94104.

National Academy of Sciences. For U.S. scientists who wish to commence visits from January 1, 1989 to December 31, 1989 in the USSR, Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland, Romania, or Yugoslavia. Length of visit is one month (lecture, survey) or three to twelve months (research). Requirements are U.S. citizenship and a Ph.D. or its equivalent by June 1988 in the physical, biological, and behavioral sciences. All necessary expenses will be met by the NAS and the foreign academy, including salary reimbursement up to a predetermined maximum for long-term visits and paid expenses for accompanying family on visits of five months or more. For further information, write to the National Academy of Sciences, Office of International Affairs, Soviet and East European Affairs (GF-166), 2101 Constitution Avenue, N.W., Washington, DC 20418 (202-334-2644). Applications must be postmarked by February 29, 1988.

National Science Foundation. Travel awards for U.S. citizens who are either predoctoral students or individuals who have held a doctoral degree for three years or less as of the starting date of the Institute, to attend North Atlantic Treaty Organization (NATO) Advanced Study Institutes in Europe. Applications are made to the appropriate NATO Institute Director who nominates eligible candidates. Information may be obtained by writing to the NATO Program, Division of Research Career Development, Directorate for Scientific and Engineering Personnel and Education, National Science Foundation, Washington, DC 20550.

Natural Sciences and Engineering Research Council of Canada. Visiting Fellowships. The Government of Canada offers Fellowships on behalf of the following Canadian Government Departments and Agencies: Agriculture Canada; Department of Communications–Communications Research Centre; Department of National Defence; Energy, Mines and Resources Canada; Environment Canada–Atmospheric Environment Service, Canadian Forestry Service, Environmental Conservation Service–Inland Waters Directorate, Lands Directorate, Fisheries and Oceans Canada–Atlantic Fisheries, Pacific and Freshwater Fisheries, Ocean Science and Surveys; Health and Welfare Canada–Health Protection Branch, Food Directorate, Environmental Health Directorate, Drugs Directorate, Laboratory Centre for Disease
Control; National Museums of Canada-Museum of Natural Sciences; National Research Council Canada; Atomic Energy of Canada Limited. The annual value of the fellowships is $28,992, subject to Canadian income tax. The initial appointment is for one year, with a possibility of renewal for a second year. The applicant should hold a recent doctoral degree, or a master’s degree plus appropriate research experience. The closing date for applications is December 15 each year. Write to the Visiting Fellowships Office, Natural Sciences and Engineering Research Council of Canada, 200 Kent Street, Ottawa, Ontario, Canada KIA 1H5.

North Atlantic Treaty Organization. The NATO Science Committee has a Programme of Grants for Collaborative Research which provides financial aid for research projects aimed at stimulating, encouraging, and facilitating scientific research in collaboration between scientists working in different member countries of the Alliance, thus promoting the flow of ideas and of experimental and theoretical methods across frontiers. Projects are supported for a limited period usually not exceeding five years, covering mainly travel and living expenses abroad for principal investigators visiting partner laboratories or for staff members collaborating on specific projects with laboratories abroad. Deadlines for applications are 31 March, 15 August and 30 November. Application forms and details of the awards together with information about the Science Committee’s other programmes can be obtained from: Scientific Affairs Division, NATO, 1110 Brussels, Belgium.

North Atlantic Treaty Organization. Postdoctoral Fellowships. Awarded for twelve-month periods, for scientific study or work at appropriate nonprofit institutions in NATO countries, other than the U.S., or neighboring countries that cooperate with NATO. This program is for citizens or nationals of the U.S. Fellows receive a stipend of $21,600 for twelve-month tenure, plus dependency and travel allowances. Application deadline is November 7. For information and application material, write to NATO Program, Division of Research Career Development, National Science Foundation, Washington, DC 20550.

Royal Norwegian Council for Scientific and Industrial Research. Postdoctoral Fellowships. Fields: engineering and applied sciences. Studies can be carried out at the Universities of Oslo, Bergen, Trondheim or Tromsø, and at institutes for applied research in the same areas. English may be used at all institutes; German and French at some institutes. Deadline each year is November 15. Write to Royal Norwegian Council for Scientific and Industrial Research, Sognsveien 72, P.O. Box 70, Tasjon, 0801 Oslo 8, Norway.

Technion I.I.T. Anna Erdős Postdoctoral Fellowship. This is a newly established fellowship made possible by a donation by Professor Paul Erdős in memory of his mother. The fellowship is intended as an opportunity for a recent recipient of a doctoral degree to pursue his/her research in pure or applied mathematics. Fellowship is for one academic year, starting October 1, 1988. There are no teaching duties. Stipend is commensurate with local academic salaries, and includes round trip travel and partial housing support. Application should be sent to Chairman, Department of Mathematics, Technion I.I.T., Haifa 32000, Israel, as soon as possible but no later than March 1, 1988. Application should include curriculum vitae, statement of research interests and activities, and any relevant publications. Applicant should arrange for two letters of recommendation to be forwarded to the same address.

Weizmann Institute of Science. Feinberg Graduate School Postdoctoral Fellowships. The Fellowships are intended mainly for scientists who have recently obtained their Ph.D. degree. The Fellowships provide a 12-month stipend (with possible renewal for a second year), a small relocation allowance and a one-way air ticket. Round-trip airfare is provided if the Fellowship is extended for a second year. The annual stipend is adjusted periodically in accordance with living costs. Application forms and additional information may be obtained from the Feinberg Graduate School, The Weizmann Institute of Science, P.O. Box 26, Rehovot 76100, Israel. The review of applications is held twice a year, on January 1 and May 15.

Weizmann Institute of Science. Openings for Scientists. The Weizmann Institute of Science is now offering a limited number of temporary appointments to the position of Scientist. Candidates must have completed two years of post-doctoral work. Appointments will be made in all the areas of scientific research at the Institute: Biology, Chemistry, Biochemistry-Biophysics, Physics, Mathematics, and Science teaching. Appointments are for a period of one year, however, they may be extended for a period not to exceed 5 years from receipt of Ph.D. degree (or equivalent). Successful appointees will be eligible to apply for promotion to the position of Senior Scientist. Financial renumeration for a Scientist is at the level of Lecturer and includes all of the associated benefits. In addition, a relocation stipend is provided. Application forms and additional information may be obtained from The Feinberg Graduate School, The Weizmann Institute of Science, Rehovot, 76100 Israel. Applications are reviewed each year on January 1 and May 15.
Study in the U.S. for Foreign Nationals

Many of the programs in the Graduate Support and Postgraduate Support sections are also applicable to Foreign Nationals.

American-Scandinavian Foundation. Scandinavian scholars are awarded graduate fellowships to study in the U.S. For information write to the appropriate society in Scandinavia cooperating with the American-Scandinavian Foundation (Danmark-Amerika Fondet, Nytorv 9, DK-1450 Copenhagen K, Denmark; Suomi-Amerikka Yhdistysest Liitto, Meheleinkatu 10 A 10, SF-001 00 Helsinki 10, Finland; Íslenzk-Ameríska Félagid, P.O. Box 7051, Reykjavik, Iceland; Norge-Amerika Foreningen, Drammensveien 20C; 0255 Oslo 2, Norway; Sverige-Amerika Stiftelsen, Box 5280, S-102 46 Stockholm, Sweden), or to the Exchange Division, The American-Scandinavian Foundation, 127 East 73rd Street, New York, New York 10021.

Fulbright Program. Grants under the Fulbright Act for study, research, teaching, and lecturing in the United States are available to nationals of many countries. Information regarding these opportunities may be secured from the Cultural Affairs Officer of the United States Embassy or from the binaional Educational Commission or Foundation if there is one in the inquirer’s own country. The number of grants for each academic year will depend on funds available.

Institute of International Education. Grants for study, training and research in the U.S. Open to nationals of most countries. IIE develops and administers exchange programs for a number of organizations and corporations, and administers U.S. Government grants under the Fulbright and other educational exchange programs of the U.S. Information Service. Information regarding these opportunities may be secured from the Cultural Affairs Officer of the U.S. Embassy or from the Binational Commission or Foundation if there is one in the inquirer’s own country.

International Research and Exchanges Board (IREX). Provides opportunities for foreign scholars and students to receive training and to conduct research at academic institutions in the United States. The sending country nominates its own participants to the exchanges, while the receiving country places the nominees at appropriate institutions of higher learning, normally for periods of a semester or an academic year. Soviet and East European scholars interested in the various exchange programs administered by IREX should consult the agencies in their own countries which administer the exchanges. These are: Department of Personal Scientific Exchange, Division of International Scientific-Technical Cooperation, State Committee for Science and Technical Progress, Slavyanska 8, Sofia, Bulgaria; Foreign Department, Ministry of Education of the Czech Republic, Karmelitska, 7, Prague 1, Czechoslovakia, or International Department, Ministry of Education of the Slovak Republic, Suvorovova 16, Bratislava, Czechoslovakia; Ministry for Higher and Technical Education of the German Democratic Republic, Marx-Engels Platz 2, 102 Berlin, German Democratic Republic; International Cultural Institute, V. Dorottya utca 8, Budapest, Hungary; International Relations Department, Ministry of Science, Higher Education and Technology, ul. Miodowa 6/8, Warsaw, Poland; National Council for Science & Technology, Str. Roma 32-24, Bucharest, Romania; Federal Administration for International Scientific, Cultural, Educational, and Technical Cooperation, Kosanciccev Venac 29, 11000 Belgrade, Yugoslavia; Department of Foreign Relations, Ministry of Higher and Specialized Secondary Education of the USSR, Lyusinovskaya 51, Moscow, USSR, or Department of Foreign Relations, Academy of Sciences of the USSR, Leninsiski prospekt 14, Moscow 117901, USSR. Write to Programs Officer, IREX, 126 Alexander Street, Princeton, New Jersey 08540-7102 (609-683-9500).

Kennedy Scholarships. For citizens of the United Kingdom, these grants are for graduate study at Harvard University or the Massachusetts Institute of Technology. Application deadline is October 21. Write to Secretary, Kennedy Memorial Trust, 16 Great College Street, London SWIP 3RX, England.

Kosciuszko Foundation. One-year grants to doctoral and postdoctoral students. Applicants must be Polish citizens and have excellent command of English. Apply by November 15 for the following academic year. Write to Scholarship and Exchange Programs, the Kosciuszko Foundation, 15 East 65th Street, New York, New York 10021.

Sources of Fellowship Information

Some of the publications listed below are available at school, or college and university libraries, or in the reference room of a good public library.

American Association of University Women Educational Foundation. Programs Office, 2401 Virginia Avenue, N.W., Washington, DC 20037.


Basic Facts on Foreign Study. A fact sheet on what to expect from a study-abroad program and where to find pertinent information; 1987, 32 pp.; single copies free, $35 per 100. Communications Division, Institute of International Education, 809 United Nations Plaza, New York, New York 10017.

Chronicle Student Aid Annual, 1987. Catalog No. 502A. $19.95 plus $2.00 postage and handling. Revised annually. Chronicle Guidance Publications, Inc., Aurora Street, P.O. Box 1190, Moravia, New York 13118. Provides information on about 1,350 financial aid programs available to undergraduate, graduate, and postgraduate students, including programs sponsored by private organizations and foundations, state and federal government sources, and national and international labor unions, both AFL-CIO affiliated and independent. A Cross Reference to Programs gives easy access to programs for which a student may be eligible.


Directory of Special Opportunities for Women. Listings of national, state, county, city and private organizations, associations, programs, and agencies where women can find educational and career opportunities (290 pages). Garrett Park Press, Garrett Park, Maryland 20896. $18 prepaid.


Financial Aid for Minorities in Science. Financial assistance, scholarship and fellowship programs, resources for further information, 1981, Garrett Park Press, Garrett Park, Maryland 20896. $3.

The Foundation Center. The Foundation Center, 79 Fifth Avenue, New York, New York 10003, provides free library service through 165 libraries across the country and publishes information about U.S. foundations and the grants they award, including the biennial publication, Foundation Grants to Individuals, (5th edition, 1986, $18). Call toll-free 800-424-9836 for further information.


Fulbright-Hays Program. Information on grants for teaching in elementary and secondary schools, and colleges, abroad, as well as study (seminar) opportunities abroad, may be obtained from the Teacher
Exchange Branch, E/ASX, United States Information Agency, 301 Fourth Street, S.W., Washington, DC 20202.


International Research and Exchanges Board (IREX). Programs administered by IREX include exchanges for a semester or an academic year with the USSR and Socialist countries of Eastern Europe, grants to promote new exchanges, collaborative projects in the social sciences and humanities, developmental fellowships, short-term travel grants, and language programs. The IREX programs provide access at the predoctoral and postdoctoral levels to East European and Soviet universities and academies of sciences. For a program announcement describing the full range of IREX programs, write to the International Research and Exchanges Board, 126 Alexander Street, Princeton, New Jersey 08540-7102 (609-683-9500).

Office of Naval Research. Supports research over a wide range of areas including applied mathematics, numerical analysis, operations research, statistics and probability, and computer science. Proposals for research contracts and requests for information on ONR Programs should be addressed to: Mathematical Sciences Division, Office of Naval Research, Arlington, Virginia 22217.

President’s Commission on White House Fellowships. The White House Fellowships offer outstanding Americans early in their careers the opportunity to serve for one year, September through August, as special assistants to Cabinet Officers, to the Vice President, or to members of the President’s senior staff. The fellowships are open to all U.S. citizens, with the exception of civilian employees of the Federal government. Applications for the 1988-1989 fellowships may be obtained from the President’s Commission on White House Fellowships, 712 Jackson Place, N.W., Washington, DC 20503. Telephone (202)395-4522. The application deadline is December 15, 1987.

Private Sector Funding Available to Foreign Scholars and Students in the United States. Prepared by Ellen Wise Sivon, 1984. Lists private organizations offering awards to individual students and scholars who are already in the United States. Grant and fellowships indexed by field of study and academic level. Available from the National Association for Foreign Student Affairs, 1860 19th Street, N.W., Washington, DC 20009. $2.95, plus $2.00 postage and handling.

Rhodes Scholarships. For U.S. citizens 18–23; unmarried; Bachelor’s degree must be completed before taking up scholarship; tenable at Oxford University. Selection is made on four criteria: scholarship, character, leadership, and physical vigor. Information is available through the applicant’s college or university, or from the Rhodes Scholarship Office, Pomona College, Claremont, California 91711.

Scholarships, Fellowships, and Loans News Service and Counselors Information Services. The Staff, Bellman Publishing Company, P.O. Box 34937, Bethesda, Maryland 20817, published quarterly, $35 per year. Prepaid orders received from 12/31/87 will be billed at $32 per year. Up-to-date information regarding student financial aid. Annotated bibliography of books and professional journals.

Social Science Research Council. International Dissertation Research Fellowship Program. The program provides support to advanced doctoral candidates at U.S. universities for dissertation research in Africa; the Near and Middle East; East; South and Southeast Asia; Western Europe; Latin America, and the Caribbean. Full information on this program may be obtained by writing to the Social Science Research Council, Fellowships and Grants, 605 Third Avenue, New York, New York 10158.

Scholarships, Fellowships, and Loans by S. Norman Feingold and Marie Feingold. Volume VII, 1982: $75 and Volume VIII, 1987: $80 plus 5% if both volumes purchased on one order and shipped to the same address. Both volumes should be used together. They provide detailed coverage about assistantships, fellowships, and research opportunities that are not awarded by the institutions recipients attend. Bellman Publishing Company, P.O. Box 34937, Bethesda, Maryland 20817.

UNESCO: in the United States, UNIPUB, 4611-F Assembly Drive, Lanham, Maryland 20706-4391; in Europe, Place de Fontenoy, Paris 7e, France. (1,350 pp., paperback; $12.50).

U.S. Information Agency (USIA). For information on USIA’s international educational and cultural exchange programs, including the Fulbright Program, write the Office of Public Liaison, U.S. Information Agency, 301 Fourth Street, S.W., Washington, DC 20547.

AMS Membership Information

The American Mathematical Society is a nonprofit organization which has served the mathematical community for almost 100 years. With an express goal of furthering the interests of mathematical scholarship and research, the Society is responsive to the needs of educators, researchers, and students through its wide range of activities.

Membership privileges include free subscriptions to the Notices of the AMS, an information journal published ten times a year, and the Bulletin of the AMS, a quarterly journal that announces current research developments and contains in-depth book reviews and expository articles on contemporary mathematical research. In addition, members receive discounts of 40% on most AMS publications and reduced registration fees at AMS national and sectional meetings.

The following show some of the reasons why the AMS provides the information and resources needed by professional mathematicians.

- **AMS is a nonprofit society.** Known for its concern with fundamental research in both pure and applied mathematics, the Society is dedicated to the support and well-being of the profession.

- **AMS is a publisher.** In order to promote scholarship, the communication of ideas is essential and the Society, through its numerous journals and established book series, provides ways for mathematicians to access information.

- **AMS is an organizer.** Through its two national and eight sectional meetings held each year and the numerous research conferences organized by the Society, mathematicians have the opportunity to confer with colleagues and exchange ideas.

- **AMS is a source of information.** For many years, the Society has provided the mathematical community with reviews of the current mathematical literature through Mathematical Reviews and more recently has incorporated this information into MathSci, a database for quick and easy online bibliographic searching.

- **AMS is a coordinator for professional opportunities.** The Society publishes information annually on the state of the profession, including salary surveys and statistics on Ph.D.'s conferred and faculty mobility. Employment opportunities are listed in the two journals, Employment Information in the Mathematical Sciences and Notices of the AMS, and the Employment Register at the Annual Meeting actually schedules employment interviews.

- **AMS is a public service organization.** Through its many committees, the Society reviews the status of the profession and develops policies and programs that will best serve the mathematical community. One effort of current interest is the establishment, along with SIAM and MAA, of a liaison in Washington to help promote the public image of mathematics and to develop funding for mathematical research and education.

To apply for membership, simply complete the membership application on the following page, and return it along with your payment.
AMERICAN MATHEMATICAL SOCIETY

Please read the reverse side of this form to determine what membership category you are eligible for. Then fill out this application and return it as soon as possible. Your name will be added to our mailing lists upon our receipt of your completed application, and payment for member dues.

Subscriptions to the Notices and the Bulletin (New Series) are included as part of your membership.

<table>
<thead>
<tr>
<th>Family Name</th>
<th>First</th>
<th>Middle</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please indicate below the way your name should appear in the Combined Membership List.

<table>
<thead>
<tr>
<th>Family Name</th>
<th>First</th>
<th>Middle or Initial</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Place of Birth

<table>
<thead>
<tr>
<th>City</th>
<th>State</th>
<th>Zip/Country</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Date of Birth

<table>
<thead>
<tr>
<th>Day</th>
<th>Month</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If formerly a member of AMS, please indicate dates

Check here if you are now a member of either MAA or SIAM

Degrees, with institutions and dates

<table>
<thead>
<tr>
<th>Family Name</th>
<th>First</th>
<th>Middle</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Present position

Firm or institution

<table>
<thead>
<tr>
<th>City</th>
<th>State</th>
<th>Zip/Country</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Primary Fields of Interest (choose five from the list at right)

Secondary Fields of Interest (choose five from the list at right)

Address for all mail

Signature

Prepayment Methods and Mailing Addresses

All payments must be in U.S. Funds.

Send checks, money orders, UNESCO coupons to American Mathematical Society, P.O. Box 1571, Annex Stalion, Providence, RI 02901-9930

To use VISA or MasterCard, fill in information requested and mail to American Mathematical Society, P.O. Box 6248, Providence, RI 02940.

For Foreign Bank Transfers: The name and address of the AMS bank is Rhode Island Hospital Trust National Bank, Account #000-753-111, One Hospital Trust Plaza, Providence, RI 02903, U.S.A.

VISA ○ MasterCard ○ Account number Expiration date

Application for Membership 1988

Date .............................. 19 ............

Fields of Interest

If you wish to be on the mailing lists to receive information about publications in fields of mathematics in which you have an interest, please consult the list of major headings of the 1980 Mathematics Subject Classification below. Select no more than five category numbers and fill in the numbers where indicated on the left. These categories will be added to your computer record so that you will be informed of new publications or special sales in the fields you have indicated.

00 General
01 History and biography
03 Mathematical logic and foundations
04 Set theory
05 Combinatorics
06 Order, lattices, ordered algebraic structures
08 General mathematical systems
11 Number theory
12 Field theory and polynomials
13 Commutative rings and algebras
14 Algebraic geometry
15 Linear and multilinear algebra, matrix theory
16 Associative rings and algebras
17 Nonassociative rings and algebras
18 Category theory, homological algebra
19 K-theory
20 Group theory and generalizations
22 Topological groups, Lie groups
26 Real functions
28 Measure and integration
30 Functions of a complex variable
31 Potential theory
32 Several complex variables and analytic spaces
33 Special functions
34 Ordinary differential equations
35 Partial differential equations
39 Finite differences and functional equations
40 Sequences, series, summability
41 Approximations and expansions
42 Fourier analysis
43 Abstract harmonic analysis
44 Integral transforms, operational calculus
45 Integral equations
46 Functional analysis
47 Operator theory
49 Calculus of variations and optimal control; optimization
51 Geometry
52 Convex sets and related geometric topics
53 Differential geometry
54 General topology
55 Algebraic topology
57 Manifolds and cell complexes
58 Global analysis, analysis on manifolds
60 Probability theory and stochastic processes
62 Statistics
65 Numerical analysis
68 Computer science
70 Mechanics of particles and systems
73 Mechanics of solids
76 Fluid mechanics
78 Optics, electromagnetic theory
80 Classical thermodynamics, heat transfer
81 Quantum mechanics
82 Statistical physics, structure of matter
83 Relativity
85 Astronomy and astrophysics
86 Geophysics
90 Economics, operations research, programming, games
92 Biology and behavioral sciences
93 Systems theory; control
94 Information and communication, circuits

M8NO
Membership Categories

Please read the following to determine what membership category you are eligible for, and then indicate below the category for which you are applying.

For ordinary members whose annual professional income is below $30,000, the dues are $66; for those whose annual professional income is $30,000 or more, the dues are $88.

For a joint family membership, one pays ordinary dues, based on his or her income, and the other pays ordinary dues based on his or her income, less $20. (Only the member paying full dues will receive the Notices and the Bulletin as a privilege of membership, but both members will be accorded all other privileges of membership.)

Minimum dues for contributing members are $132.

For either students or unemployed individuals, dues are $22, and annual verification is required.

The annual dues for reciprocity members who reside outside the U.S. and Canada are $44. To be eligible for this classification, members must belong to one of those foreign societies with which the AMS has established a reciprocity agreement, and annual verification is required. Reciprocity members who reside in the U.S. or Canada must pay ordinary member dues ($66 or $88).

The annual dues for external members, those who reside in developing countries which do not have any mathematical society, are $47.

Members can purchase a multi-year membership by prepaying their current dues rate for either two, three, four or five years. This option is not available to either unemployed or student members.

1988 Dues Schedule

For any category of membership where no dues prices are given, the higher one is to be paid by persons whose annual professional income is $30,000 or more.

Ordinary member ........................................ $66 $88
Joint family member (full rate) ........................................ $66 $88
Joint family member (reduced rate) ........................................ $46 $68
Contributing member (minimum $132) ........................................ $46 $68
Student member (please verify) ........................................ $22
Unemployed member (please verify) ........................................ $22
Reciprocity member (please verify) ........................................ $44 $66 $88
External member ........................................ $47
Multi-year membership ........................................ $ for years

1 Student Verification (sign below)

I am a full-time student at ........................................ currently working toward a degree.

2 Unemployed Verification (sign below) I am currently unemployed and actively seeking employment. My unemployment status is not a result of voluntary resignation or of retirement from my last position.

3 Reciprocity Membership Verification (sign below) I am currently a member of the society indicated on the right and am therefore eligible for reciprocity membership.

Reciprocating Societies

- Allahabad Mathematical Society
- Asociacion Matematica Espanola
- Australian Mathematical Society
- Berliner Mathematische Gesellschaft e.V.
- Calcutta Mathematical Society
- Dansk Matematikforening
- Deutsche Mathematiker-Vereinigung e.V.
- Edinburgh Mathematical Society
- Gesellschaft fur Angewandte Mathematik und Mechanik
- Glasgow Mathematical Association
- Indian Mathematical Society
- Iranian Mathematical Society
- Irish Mathematical Society
- Islenzka Stærfdraðafélags
- Israel Mathematical Union
- Korean Mathematical Society
- London Mathematical Society
- Malaysian Mathematical Society
- Mathematical Society of Japan
- Mathematical Society of the Philippines
- Mathematical Society of the Republic of China
- New Zealand Mathematical Society
- Nigerian Mathematical Society
- Norsk Matematikforening
- Österreichische Mathematische Gesellschaft
- Polskie Towarzystwo Matematyczne
- Punjab Mathematical Society
- Real Sociedad Matemática Española
- Sociedad Colombiana de Matemática
- Sociedad de Matemática de Chile
- Sociedad Matemática de la Republica Dominicana
- Sociedad Matemática Mexicana
- Sociedade Brasileira Matemática
- Sociedade Brasileira de Matemática Aplicada e Computacional
- Società Paranaense de Matemática
- Sociedade Portuguesa de Matemática
- Societat Catalana de Ciencies Físiques, Químiques i Matemàtiques
- Société de Mathématiques Appliquées et Industrielles
- Société Mathématique de Belgique
- Société Mathématique de France
- Société Mathématique Suisse
- Southeast Asian Mathematical Society
- Suomen Matemaattinen Yhdistys
- Svenska Matematiker-klubben
- Union Matemática Argentina
- Unione Matematica Italiana
- Vijnana Parishad of India
- Wiskundig Genootschap

Signature
POSITIONS AVAILABLE

College of Staten Island (CUNY)
Department of Mathematics

A tenure-track position in mathematics is available for Fall 1988. Requirements: Ph.D. demonstrated potential for research; strong commitment to teaching. All mathematics research areas will be considered with special preference given to probability and statistics. Rank and salary commensurate with qualifications. The College of Staten Island is a senior college in CUNY. Send resume and three letters of reference to: Dr. Jane Coffee, Mathematics Department, College of Staten Island, 715 Ocean Terrace, Staten Island, N.Y. 10301 by March 1, 1988. AA/EOE Employer.

A tenure track position (Assistant Professor) in mathematics is available beginning in September 1988. Applicants should have a Ph.D. in mathematics and a strong commitment to quality teaching. The teaching load is twelve hours per semester. Salary and fringe benefits are competitive. commensurate with credentials and experience.

Applicants should send resume, transcripts and three letters of reference to: Dr. Richard Escobales, Chairman, Department of Mathematics, Canисius College, Buffalo, New York 14208. AA/EOE.

UNIVERSITY OF LOUISVILLE
DEPARTMENT OF MATHEMATICS

UNIVERSITY OF LOUISVILLE, DEPARTMENT OF MATHEMATICS. LOUISVILLE. KY 40292. CHAIR: University of Louisville. Department of Mathematics, seeks an established mathematician to be Department Chair. Candidates should have active research program; substantial scholarly achievement, teaching and administrative experience and interest in both undergraduate and graduate program development. Ph.D. in mathematics required. Research areas compatible with those already in Department are desirable, but not required. Experience directing Ph.D. theses desirable, but not essential. Appointment will be at Associate Professor or Professor level, depending upon qualifications. Interested candidates should send letter of application, vitae and at least three letters of recommendation to: Search Committee Chair, Department of Mathematics. Deadline for applications is January 4, 1988. AA/EOE.

TENURE TRACK POSITION
IN MATHEMATICS

The department of mathematics at Lehigh University will have at least one tenure track position available beginning in Fall 1988. Applications in the area of geometry, algebra, analysis, numerical analysis, and applied mathematics will be considered with preference given to those candidates whose research interests best complement the activities of the department. Teaching load is approximately six hours per week. A strong commitment to and demonstrated excellence in both teaching and research are required. Send curriculum vitae and have letters from three references sent to:

Professor G. T. McAllister
Chairman, Search Committee
Department of Mathematics
Building #14
Lehigh University
Bethlehem, PA 18015

Minority and female applicants are encouraged to apply. Lehigh University is an equal opportunity affirmative action employer.

Department of Mathematics
Stanford University
Stanford. California 94305-2125
Prof. Solomon Feferman, Chairman

Gabor Szegö Assistant Professorships. The department expects to make two appointments in 1988-89 for a term of two years, possibly renewable for a third year. Applicants are expected to show outstanding promise in research and clear evidence of achievement. They should have received the Ph.D. prior to the start of the appointment but not before 1986. Stanford is committed to excellence in teaching, and applicants should count this as one of their goals. The teaching load consists of five 3-hour quarterly courses, and may include graduate courses. The nine-month salary for 1988-89 will be at least $30,000. Candidates should send a letter of application with a curriculum vitae, a list of publications and information concerning teaching experience, and should arrange to have three letters of recommendation sent to Prof. Solomon Feferman, Chairman, Department of Mathematics, Stanford University, Stanford, CA 94305-2125 by January 1, 1988. Stanford is an Affirmative Action, Equal Opportunity Employer, and welcomes applications from women and minorities.
POSITIONS AVAILABLE

Carnegie Mellon University
Department of Mathematics

The Department expects to make one tenure-track appointment in the area of numerical analysis beginning in Fall 1988. Although this appointment is expected to be at the Assistant Professor level, we also solicit exceptionally well-qualified applicants for more advanced positions. Candidates should send a resume to: Appointments Committee, Department of Mathematics, Carnegie Mellon University, Pittsburgh, PA 15213. Carnegie Mellon University is an Affirmative Action/Equal Opportunity Employer.

Temple University
Department of Mathematics
Assistant Professorships

The Mathematics Department expects to have, pending final budgetary approval, three tenure-track positions at the assistant professor level beginning Fall 1988. Preferred specialties: Applied Math/Analysis, Computational Math/Combinatorics, Algebra/Geometry. Outstanding research potential and serious commitment to teaching required. Competitive salaries and excellent fringe benefits. Vita and three letters of reference should be sent be sent by January 15, 1988 to Louis Raymon, Chairman, Box N, Department of Mathematics, Temple University, Philadelphia, PA 19122.

Women and Minorities are especially encouraged to apply. Temple University is an Affirmative Action and Equal Opportunity Employer.

Teach in Asia or Europe

The University of Maryland University College seeks excellent teachers for openings on U. S. military bases overseas. Appointments begin August, 1988. Requirements include M.A. or Ph.D., recent college teaching experience, and U.S. citizenship. Competence to teach in another discipline desirable. Benefits include transportation and military base privileges (PX, commissary, etc.). Frequent travel and the cost of schooling make these positions difficult for those with children. Send resume to Dr. Ralph E. Mills, Assistant to the Chancellor, Overseas Programs, The University of Maryland University College, College Park, MD 20742-1642. AA/EEO.

University of Toronto
Department of Mathematics

Applications are invited from recent Ph.D.’s for several limited term positions at the main campus beginning July 1, 1988 for a term of up to three years. These positions, which are subject to final budgetary approval, are open to all branches of pure and applied mathematics.

Duties will consist of research and teaching, and candidates must demonstrate clear strength in both.

Applicants should send their complete curriculum vitae, together with a list of publications and arrange to have at least three recent letters of reference sent directly to:

Professor D. R. Masson
Associate Chairman
Department of Mathematics
University of Toronto
Toronto, Canada M5S 1A1

To insure full consideration, applications and letters of reference should be received by January 31, 1988.

The University of Toronto encourages both men and women to apply. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents.

Mary Washington College
Department of Mathematics

A tenure-track assistant professor in mathematics position is anticipated starting Fall ’88. Candidates should have (by Aug. ’88) a Ph.D. in pure or applied mathematics, and must possess both a strong commitment to teaching and to continuing scholarly development. MWC is a small (3200), state-supported, coeducational, selective, undergraduate, liberal arts college located 50 miles from Richmond and Washington, D.C. Teaching load is approx. 110 students each semester in 9 or 12 contact hrs/wk. Send resume, graduate transcript, and 3 letters of reference—all to arrive by January 11, 1988—to: John R. Tucker, Search Chairman, Department of Mathematics, Monroe 2090, Mary Washington College, Fredericksburg, VA 22401-3538. AA/EO.

The University of Virginia

Applications are invited for:
1. Faculty positions at any level starting September 1, 1988. Some preference will be given to applicants in algebraic geometry and PDE but all strong applications will be considered.
2. The Whyburn Research Instructorship, a two year appointment with reduced teaching load starting September 1, 1988.
3. A tenure track Assistant Professorship in the History of Mathematics and the History of Science. Applicants should have both a strong mathematics background and a record of achievement and scholarship in the History of Mathematics.


Applications should be mailed to:
Chairman, Hiring Committee
Department of Mathematics
Mathematics – Astronomy Building, Cabell Drive
University of Virginia
Charlottesville, VA 22903

The University of Virginia is an Equal Opportunity/Affirmative Action Employer.

Emory University
Mathematics

The Department of Mathematics and Computer Science has three openings in mathematics to begin September 1, 1988. The positions are at the level of tenure-track assistant professor, or higher, in the case of exceptional candidates. Applicants must have a Ph.D. in mathematics and a strong record (or promise) of research.

The following areas of particular interest to us: geometric analysis, numerical analysis, combinatorics, and applied mathematics (differential equations). Applications will be considered; however, from candidates with strong research credentials in any area of mathematics.

The department presently has 20 permanent members comprising several active research groups. Our graduate program offers the Ph.D. in mathematics and master’s degrees in mathematics and computer science. Teaching requirements are 6 hours per week, including graduate and undergraduate courses. Salaries are competitive, and commensurate with experience.

Send vita and names of three references to: Prof. Peter Winkler, Dept. of Mathematics and Computer Science, Emory University, Atlanta, GA 30322. Please have reference letters forwarded to us. Screening of applications will begin Feb. 1, 1988.

Emory University is an equal opportunity/affirmative action employer.
**POSITIONS AVAILABLE**

**THE GEORGIA INSTITUTE OF TECHNOLOGY**

The School of Mathematics expects to have available some visiting and tenure-track positions beginning in the Fall of 1988. The School enjoys broad coverage in modern analysis and applied mathematics and is targeting its hiring on the computational aspects of its program. Excellent accomplishments or potential in research and teaching is required. Send resume to William J. Kammerer. Acting Director, School of Mathematics, Atlanta. Georgia 30332-0160. Georgia Tech, a member of the University System of Georgia, is an Equal Opportunity/Affirmative Action Employer.

**THE UNIVERSITY OF ALABAMA AT BIRMINGHAM DEPARTMENT OF MATHEMATICS**

The department of mathematics has faculty positions at all ranks. The department is especially interested in establishing a group in Numerical PDE/Scientific computation over the next five years. Access to the Alabama Super Computer (using a Sun Station and a T-1 line to a Cray X-MP/24) will be available in February, 1988. Other areas which will enhance our proposed Ph.D. in Applied Mathematics will be seriously considered. Applicants for senior positions must demonstrate excellence in research, while applicants for junior positions must exhibit the promise of excellence. Send as soon as possible a curriculum vitae, list of publications, a few selected reprints, and the names of three references to Search Committee. Department of Mathematics. University of Alabama at Birmingham. Birmingham. AL 35294. UAB is an Equal Opportunity/Affirmative Action Employer.

**MILLSAPS COLLEGE DEPARTMENT OF MATHEMATICS JACKSON, MS 39210**

Applications are invited for a tenure track position starting Fall 1988. Candidates must possess a PhD in Mathematics and a dedication to quality teaching. Rank is open and salary will be competitive. Candidates from all areas of mathematics are encouraged to apply. Submit a letter of application, resume, and three letters of recommendation to Dr. Cecil E. Robinson, Jr., Chair. Department of Mathematics, Millsaps College, Jackson, MS 39210. Apply by January 1, 1988 for fullest consideration since Dr. Robinson will be interviewing at the Annual Meeting of the AMS in Atlanta, GA; applications will, however, be considered until the position if filled. Millsaps College is an Equal Opportunity Employer and encourages applications from women and minorities.

**MATHEMATICS DEPARTMENT UNITED STATES NAVAL ACADEMY ANNAPOLIS, MARYLAND 21402-5002**

Applications are invited for tenure-track appointments at all faculty levels commencing August 1988. Ten month salary, commensurate with experience and qualifications. Research opportunities exist for augmenting salary during summer. Applicants must possess Ph.D., have a commitment to excellence in teaching and be capable of pursuing independent research. Send inquiries and applications to J. M. D'Arancheglo. Required of each applicant are a résumé, transcripts, and three letters of recommendation discussing applicant's teaching and research. The Naval Academy is an EO/AA employer.

**CLAREMONT McKENNA COLLEGE Endowed Position in Computer Science and Applied Mathematics**

Applications are invited for an endowed tenure-track position in Computer Science and Applied Mathematics with rank and salary dependent on qualifications. Starting date fall 1988.

Claremont McKenna College is a liberal arts college with 800 students. It is a member of the Claremont Colleges (along with Pomona. Scripps. Harvey Mudd. and Pitzer Colleges and Claremont Graduate School). The Claremont Colleges have a total of forty-three mathematicians and computer scientists. and are located in Claremont, Southern California.

Qualifications for the positions include a Ph.D. in a computer-related field such as Computer Science, Mathematics, Operations Research, or Information Science. If the degree is in a field other than Computer Science, substantial formal education in Computer Science is required.

Applicants should have a strong commitment to undergraduate teaching, an established scholarly record, and practical experience with computer applications. The appointee will be expected to teach some applied mathematics courses in addition to computer science courses and to participate in course and program development.

The College is an Equal Opportunity/Affirmative action employer. Applications will be reviewed as soon as received and a decision reached preferably by January 1988. Please send resume and the names of four references to Professor John Ferling. Chairman. Computer Science Search Committee. c/o Dean of Faculty's Office. Claremont McKenna College. Claremont. CA 91711.

**The Ohio State University Department of Mathematics**

The Department of Mathematics of The Ohio State University hopes to fill several positions, both visiting and permanent, effective Autumn Quarter 1988. Candidates in all areas of applied and pure mathematics are invited to apply. Significant research accomplishments or exceptional research promise, and evidence of good teaching ability, will be expected of successful applicants.

Please send credentials and have letters of recommendation sent to Professor Joseph Ferrar. Department of Mathematics. The Ohio State University. 231 W. 18th Avenue. Columbus. Ohio 43210. Review of resumes will begin immediately.

The Ohio State University is an Equal Opportunity/Affirmative Action Employer.

**University of Toronto Department of Mathematics**

Applications are invited from recent Ph.D.'s for one or more positions, tenure-stream and limited term, at Erindale Campus beginning July 1, 1988. These positions, which are subject to final budgetary approval, are open to all branches of pure and applied mathematics.

Duties will consist of research and teaching and candidates must demonstrate clear strength in both.

Applicants should send their complete curriculum vitae, together with a list of publications and arrange to have at least three recent letters of reference sent directly to: Professor D. R. Masson Associate Chairman Department of Mathematics University of Toronto Toronto, Canada M5S 1A1

To insure full consideration, applications and letters of reference should be received by January 31, 1988.

The University of Toronto encourages both men and women to apply. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents.
DEPAUW UNIVERSITY, DEPT. OF MATHEMATICS AND COMPUTER SCIENCE GREENCASTLE, INDIANA 46135

A tenure track position is available beginning in August 1988. Applicants should have a Ph.D. in any field of Mathematics with competence to teach courses in our undergraduate computer science major (preference given to someone with a Masters Degree in computer science). A commitment to excellence in teaching at the undergraduate level is essential. Duties will include teaching three courses each semester. Rank and salary are open and will be negotiated on the basis of qualifications and experience. Send vita, transcript and three letters of recommendation to John R. Anderson at the above address no later than Feb. 1. Call (317) 658-4725 for more information. Send information before Jan. 1 to make interview at AMS meeting in January more useful. DePauw Univ. is an EO-AA Employer.

MILLS COLLEGE
Department of Mathematics and Computer Science
Oakland, California 94613

Mills College is seeking outstanding candidates for a tenure-track position as Assistant, Associate or Full Professor of Mathematics commencing Fall 1988. Candidates must submit evidence of superior teaching and research abilities, and demonstrate a commitment to become involved in a highly innovative and energetic department. Rank and salary will depend on experience and qualifications. The initial contract will be for three years, subject to final administrative approval. Mills College is an Affirmative Action/Equal Opportunity Employer. Send vita and three letters of reference to:
Professor Richard Bassein
Chair of the Mathematics Search Committee
Mills College
Oakland, CA 94613
Deadline for application: January 15, 1988

UNIVERSITY OF KANSAS
DEPARTMENT OF MATHEMATICS
BLOOMINGTON, IL 61702

Applications are invited for one or more tenure track positions at the rank of Assistant Professor starting the fall semester 1988. Candidates must possess a Ph.D. in mathematics, a dedication to quality teaching in an independent, liberal arts university, and active research interests. Preference may be given to individuals who have active professional interests in applied mathematics and either engineering or computer science. Candidates should submit a vita and three letters of recommendation to Melvyn W. Jeter, Head, Department of Mathematics, Illinois Wesleyan University, Bloomington, IL 61702. Equal Opportunity Employer.

DREXEL UNIVERSITY
Head, Department of Mathematics and Computer Science

Candidates must have a strong research record and a demonstrated commitment to applied mathematics, probability and statistics, and computer science. Send vita and names of references to Dr. J. T. Wimp, Search Committee, Department of Mathematics and Computer Science, Drexel University, Philadelphia, Pennsylvania 19104. Applications from women and minorities are actively solicited. Drexel University is an AA/EOE.

University of Missouri-Rolla
Chair - Department of Mathematics and Statistics

The Department invites applications for the position of Department Chair, to begin September 1, 1988. The Rolla campus is one of four within the University of Missouri system, has an enrollment of about 5500, and emphasizes engineering and science. The Department has 22 faculty and offers bachelor, master, and doctoral programs in mathematics and statistics. Candidates should have a strong research record and a commitment to excellent teaching. The review of applications will begin October 1, 1987, and will continue until the position is filled. Applications from women and minorities are actively encouraged. AA/EOE.

Department of Mathematics
UNIVERSITY OF KANSAS

Applications are invited for tenure-track and temporary positions at all levels, commencing August 16, 1988 or as negotiated. Field is unrestricted but preference will be given to algebra, combinatorics and numerical analysis, and to areas meshing well with the department's needs. Require Ph.D., or Ph.D. dissertation accepted with only formalities to be completed. Send detailed resume and dissertation abstract; arrange for three letters of reference to be sent directly to C. J. Himmelberg, Chairman, Department of Mathematics, University of Kansas, Lawrence, KS 66045-2142. Deadline date: December 1, 1987, then monthly until August 1, 1988.
The University of Kansas is an Affirmative Action/Equal Opportunity Employer.

Department of Mathematics
UNIVERSITY OF KANSAS

Applications are invited for tenure-track and temporary positions at all levels, commencing August 16, 1988 or as negotiated. Field is unrestricted but preference will be given to algebra, combinatorics and numerical analysis, and to areas meshing well with the department's needs. Require Ph.D., or Ph.D. dissertation accepted with only formalities to be completed. Send detailed resume and dissertation abstract; arrange for three letters of reference to be sent directly to C. J. Himmelberg, Chairman, Department of Mathematics, University of Kansas, Lawrence, KS 66045-2142. Deadline date: December 1, 1987, then monthly until August 1, 1988.
The University of Kansas is an Affirmative Action/Equal Opportunity Employer.

RICE UNIVERSITY
DEPARTMENT OF MATHEMATICS

Applications are invited for one or more research/teaching positions in the fields of analysis, geometry, or topology at the rank of Assistant Professor or higher. This position will remain open until filled. Applications are also invited for a possible G. C. Evans Instructorship for two to three years for a promising research mathematician with research interests in common with the active research areas at Rice. Please mail inquiries to:

Appointments Committee
Department of Mathematics
Rice University
P. O. Box 1892
Houston, TX 77251

Rice University is an Equal Opportunity/Affirmative Action Employer.
Positions Available

University of Wyoming
Department of Mathematics

Invites applications for the following positions:
A senior-level position in the area of computational mathematics. Candidates should have an outstanding record of accomplishment in an area of applied mathematics that makes significant use of high speed computers. The appointee will be expected to interact with our Center for Computational Mathematics and Mechanics and to provide leadership in the developing field of scientific computation.

One or more tenure-track positions at the assistant professor level in the area of applied mathematics.

One or more visiting positions at levels appropriate for the applicant.

Send resume and direct three letters of recommendation to:
Professor R. A. Mena
Chairman, Recruiting Committee
Mathematics Department
University of Wyoming
Laramie, WY 82071
307-766-4222

Applications completed by January 31, 1988 will be given first consideration. The University of Wyoming is an Equal Opportunity Employer.

UCLA Department of Mathematics
Temporary Positions

Three E. R. Hedrick Assistant Professorships. Applicants must show strong promise in research and must have received the Ph.D. during the past three or four years (but may be of any age): no restrictions as to field; salary $35,800. Three year appointment. Teaching load: Four quarter courses per year, which may include one advanced course in candidate’s field. Deadline for applications is January 1, 1988.

Also, subject to administrative approval, a few adjunct assistant professorships: two year appointment; strong research and teaching background; no restriction as to field. Salary $31,500-33,000 for academic year. Teaching load: Five quarter courses per year.

Also several positions for visitors and lecturers.

To apply, write to Theodore W. Gamelin, Chair, Department of Mathematics, University of California, Los Angeles, CA 90024-1555.

UCLA is an equal Opportunity/Affirmative action employer.

UCLA Department of Mathematics
Regular Positions in Pure Mathematics

Four or five regular positions in pure mathematics. Specific fields of interest include algebra/number theory, analysis, differential equations, geometry/topology, logic, probability, and statistics. Very strong research and teaching background required. Positions initially budgeted at the assistant professor level. Sufficiently outstanding candidates at higher levels and/or in other fields will also be considered. Teaching load: Averaging 1.5-courses per Quarter, or 4.5 Quarter courses per year.

To apply, write to Theodore W. Gamelin, Chair, Department of Mathematics, University of California, Los Angeles, CA 90024-1555.

UCLA is an equal Opportunity/Affirmative action employer.

UCLA Department of Mathematics
Regular Positions in Applied/Computational Mathematics

Two or three regular positions in applied and computational mathematics. Preference will be given to candidates in numerical analysis, mathematical modeling, and scientific/engineering computing. Very strong research and teaching background required. Positions initially budgeted at the assistant professor level. Sufficiently outstanding candidates at higher levels and/or in other fields will also be considered. Teaching load: Averaging 1.5 courses per Quarter, or 4.5 Quarter courses per year.

To apply, write to Theodore W. Gamelin, Chair, Department of Mathematics, University of California, Los Angeles, CA 90024-1555.

UCLA is an equal Opportunity/Affirmative action employer.

Macalester College

Two tenure-track positions in mathematics (subject to administrative approval), for September 1988. Candidates should have Ph.D. in mathematics and interest in teaching and research in four-year liberal arts college. Teaching load is 6-9 hrs/wk. Competitive salary, good benefits, urban residential location. Send resume and three references to John Schue, Math/Computer Science, Macalester College, St. Paul, MN 55105 by Feb. 1, 1988. Equal opportunity, affirmative action employer, women and minorities especially encouraged to apply.

University of California, Santa Barbara
Department of Mathematics

Applications are invited for the Ky Fan Assistant Professorship. The Ky Fan assistant professorship is a special two-year nonrenewable position which carries a research stipend. Appointment is effective July 1, 1988. Candidates must possess a Ph.D. by September 1988. Selection will be based primarily on demonstrated research achievement. Teaching experience is desirable. Teaching load will consist of four one-quarter courses per year. To apply send vita and publication list, and arrange to have three letters of recommendation sent to: Alex Rosenberg, Chair, Department of Mathematics, University of California, Santa Barbara, CA 93106. All applications received by January 11, 1988 will be given thorough consideration. Proof of U.S. citizenship or eligibility for U.S. employment will be required prior to employment (Immigration Reform and Control Act of 1986). UCSB is an equal Opportunity/Affirmative action employer.
University of California, Santa Barbara
Department of Mathematics

Applications are invited for a tenure track appointment at the assistant professor level, effective July 1, 1988. Junior candidates in all areas of the mathematical sciences will be given serious consideration. Candidates in the area of applied discrete mathematics are especially sought. Outstanding research and teaching accomplishments and potential will be the primary criteria for selection. Ph.D. required by the time of appointment. Applicants should send vita and publication list, and arrange to have three letters of recommendation sent to: Alex Rosenberg, Chair, Department of Mathematics, South Hall 6607, University of California, Santa Barbara, CA 93106 by January 11, 1988. Proof of U.S. citizenship or eligibility for U.S. employment will be required prior to employment (Immigration Reform and Control Act of 1986). An equal opportunity/affirmative action employer.

OREGON STATE UNIVERSITY
Numerical Analysis with Applications
Assistant Professor position in numerical analysis with applications may become available September 1988. Salary depends on qualifications. Closing date January 4, 1988. Write to:
Professor Robert Higdon
Staff Selection Committee
Department of Mathematics
Oregon State University
Corvallis, OR 97331

OREGON STATE UNIVERSITY
Assistant Professor position in Algebra, Analysis, Geometry, Probability, or Topology may become available September 1988. Salary depends on qualifications. Closing date January 4, 1988. Write to:
Professor Bent Petersen
Staff Selection Committee
Department of Mathematics
Oregon State University
Corvallis, OR 97331

THE UNIVERSITY OF TEXAS
AT SAN ANTONIO
DIRECTOR
DIVISION OF MATHEMATICS, COMPUTER SCIENCE AND SYSTEM DESIGN

The College of Sciences and Engineering at the University of Texas at San Antonio is seeking a Director of the Division of Mathematics. Computer Science and Systems Design who will spearhead the continued development of excellence in the undergraduate and graduate programs. The division is the largest of four divisions within the college and is responsible for instructional programs, staffing, budget, planning supervision and curriculum.

Requirements: Candidates should have an earned doctorate in one of the disciplines encompassed in the division and should qualify for a senior level academic position. Successful teaching experience, demonstrated research record, and potential for administrative responsibility are requisites for the position.

To apply: Submit a letter of application and a vita with the names of at least three references to: Chairperson, Faculty Search Committee, Department of Computer Science, The University of North Carolina at Charlotte, Charlotte, NC 28223.
UNCC IS AN EOE/AA EMPLOYER.

MATHEMATICS DEPARTMENT
WILLAMETTE UNIVERSITY
SALEM, OR 97301

Two positions beginning Aug. 1988, one tenure-track and one a one-year sabbatical replacement. PhD in mathematics is required. Assistant Professorship preferred. Postmark a letter of application detailing commitment to teaching and scholarship and interest in the liberal arts. 3 letters of recommendation and graduate transcript by February 5, 1988 to: Steve Prothero, Chairman, Mathematics Department. Independent and coeducational. University has 1500 undergraduates, a College of Law and a Graduate School of Management. An Equal Opportunity Employer. women and minorities are encouraged to apply.

University of North Carolina
AT CHARLOTTE
DEPARTMENT OF COMPUTER SCIENCE

Several tenure-track positions in all areas at Assistant, Associate, or Full Professor level in Computer Science/Computer Engineering. Salary and rank dependent on qualifications and experience. Salary is competitive. Ph.D. in CS/CE preferred. Ph.D. in a related area to CS/CE considered. Applications accepted until the positions are filled. The Department of Computer Science is housed in the College of Engineering and offers both undergraduate and graduate degrees in computer science. Active research areas in the department include artificial intelligence, computer architecture, computer vision/robotics, database systems, data communication, theoretical CS, VLSI design. On-campus Ph.D. level research and study are available through cooperation with other participating institutions of the Microelectronics Center of N.C. (MCNC). A wide variety of excellent computing facilities including IBM, VAX, Burroughs, Harris, Xerox, Sun, and others are available to support educational and research activities. Also, as a participant in MCNC, UNCC has access to state-of-the-art computing, VLSI design, and fabrication facilities. Charlotte is the largest city in the Carolinas with excellent housing, good schools and mild climate.

Vita, transcript and four letters of reference should be sent to Chairperson, Faculty Search Committee, Department of Computer Science, The University of North Carolina at Charlotte, Charlotte, NC 28223.

UNCC IS AN EOE/AA EMPLOYER.

1340
POSITIONS AVAILABLE
The Ohio State University
Department of Mathematics
Nominations and applications are invited for a Chair in Numerical Analysis and Scientific Computation. This position is funded in part by the Eminent Scholar program of the State of Ohio and includes the appointment as Professor in the Department of Mathematics. It has been created to attract an internationally recognized scholar with a distinguished record of research and teaching. The person filling this position must have strong and broad interests impacting pure, applied, and computational mathematics. He or she will be expected to provide leadership for the research programs in applied mathematics. The University has committed substantial resources to the support of research activities of the Eminent Scholar, including access to a CRAY X-MP on campus.

Nominations, applications, and requests for further information should be sent to:
Joseph Ferrar, Chairman
Department of Mathematics
The Ohio State University
231 W. 18th Avenue
Columbus, Ohio 43210
Telephone: (614) 292-7173

The Ohio State University is an Equal Opportunity/Affirmative Action Employer.

DEPARTMENT OF MATHEMATICS AND STATISTICS
UNIVERSITY OF SOUTHERN MISSISSIPPI
MOBILE, ALABAMA 36688
Position: Assistant Professor of Mathematics. Starting Date: September 1, 1988. Qualifications: Applicants must have a Ph.D. in mathematics (earned or anticipated by appointment date). Strong research potential and a commitment to excellence in teaching are required. Preference is given to candidates whose research interests complement those of the current faculty. These interests include algebra, combinatorics, differential geometry, graph theory, matrix theory, linear algebra, and mathematical physics. The University has a strong commitment to enhancing the research base in numerical analysis and differential equations. Success in attracting external funding to support basic and/or applied research, though not required, will enhance the application. The normal teaching load is 6-9 credit hours per semester (15-16 per academic year), including both undergraduate and graduate courses. The successful applicant will be expected to establish an active mathematical research program and to participate in the usual faculty service activities (e.g., advisement, curriculum development, committee assignments). The normal teaching load is 6-9 credit hours per semester (15-16 per academic year), including both undergraduate and graduate courses. The successful applicant will be expected to establish an active mathematical research program and to participate in the usual faculty service activities (e.g., advisement, curriculum development, committee assignments).

The University of Southern Mississippi is one of the State's three designated comprehensive universities, with an on-campus enrollment of 10,000+. The department has 26 full-time faculty members and offers the B.S., B.A., and M.S. degrees in mathematics. We also offer the course work to support the Ph.D. in secondary education with mathematics as a specialization area. The University is a city of about 45,000 people in the pine-forested, rolling hills just 70 miles north of the beautiful and bustling Mississippi Gulf Coast. Outdoor recreational opportunities are abundant. The white sands and emerald water of the Florida Gulf Coast are just a few hours away, while New Orleans is within an easy two-hour drive. The climate is subtropical, with mild winters. The average daily high in January is 65° F. Early spring produces an astounding display of color from the indigenous azalea, dogwood, and magnolia.

Send resume and three letters of recommendation to: Chair, Search Committee, Department of Mathematics, University of Southern Mississippi, Hattiesburg, MS, 3506-5405. The University of Southern Mississippi is an affirmative action, equal opportunity employer. Applications from women and minority group members are encouraged.

The Mathematics Department invites applications for a tenure-track faculty position at the rank of assistant professor. Ph.D. required. Specialty in one of the following areas preferred: operations research, statistics, algebra, numerical analysis and differential equations. Applicants should be firmly committed to excellence in teaching undergraduate mathematics. Salary dependent on qualifications and experience.

Application deadline: January 30, 1988
Starting date: September 1, 1988
Send vitae and names of 3 professional references to:
Dr. Suzanne McGill, Chair
Department of Mathematics and Statistics
University of South Alabama
Mobile, AL 36688
Telephone: (205) 460-6264

THE UNIVERSITY OF SOUTHERN MISSISSIPPI
IS AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EDUCATIONAL INSTITUTION

THE UNIVERSITY OF SOUTHERN MISSISSIPPI
Department of Mathematics
Applications are invited for two tenure-track positions, both at the assistant professor level. Candidates must have the Ph.D. in mathematics, vigorous research interests, and a dedication to teaching. Preference will be given to those candidates whose research interests complement those of the current faculty. These interests include algebra, combinatorics, differential geometry, graph theory, matrix theory, linear algebra, and mathematical physics. We are also interested in developing a research base in numerical analysis and differential equations. Success in attracting external funding to support basic and/or applied research, though not required, will enhance the application.

The normal teaching load is 6-9 credit hours per semester (15-16 per academic year), including both undergraduate and graduate courses. The successful applicant will be expected to establish an active mathematical research program and to participate in the usual faculty service activities (e.g., advisement, curriculum development, committee assignments).

The salary is negotiable and competitive, dependent upon qualifications. The starting date will be Fall, 1988-89. While the application deadline is open, selection may begin as early as 2/1/88. Interviews will be conducted at the 94th Annual Meeting of the AMS, January 6-9, 1988, in Atlanta, GA. Candidates should contact the Department prior to January 1 to schedule interviews of duration longer than those available through the MSER.

The University of Southern Mississippi is one of the State's three designated comprehensive universities, with an on-campus enrollment of 10,000+. The department has 26 full-time faculty members and offers the B.S., B.A., and M.S. degrees in mathematics. We also offer the course work to support the Ph.D. in secondary education with mathematics as a specialization area. The University is a city of about 45,000 people in the pine-forested, rolling hills just 70 miles north of the beautiful and bustling Mississippi Gulf Coast. Outdoor recreational opportunities are abundant. The white sands and emerald water of the Florida Gulf Coast are just a few hours away, while New Orleans is within an easy two-hour drive. The climate is subtropical, with mild winters. The average daily high in January is 65° F. Early spring produces an astounding display of color from the indigenous azalea, dogwood, and magnolia.

Send resume and three letters of recommendation to: Chair, Search Committee, Department of Mathematics, University of Southern Mississippi, Hattiesburg, MS, 3506-5405. The University of Southern Mississippi is an affirmative action, equal opportunity employer. Applications from women and minority group members are encouraged.

The Mathematics Department invites applications for a tenure-track faculty position at the rank of assistant professor. Ph.D. required. Specialty in one of the following areas preferred: operations research, statistics, algebra, numerical analysis and differential equations. Applicants should be firmly committed to excellence in teaching undergraduate mathematics. Salary dependent on qualifications and experience.

Application deadline: January 30, 1988
Starting date: September 1, 1988
Send vitae and names of 3 professional references to:
Director of Affirmative Action
Search Committee (Mathematics)
State University of New York/College at Old Westbury
Old Westbury, New York, 11568

The State University of New York/College at Old Westbury is an AA/EOE.
**POSITIONS AVAILABLE**

**DEPARTMENT OF MATHEMATICS & COMPUTER SCIENCE**

**UNIVERSITY OF MIAMI**

One or two tenure-track positions in Mathematics are anticipated beginning January or August, 1988. Ranks and salaries are open. Candidates must have a strong commitment to teaching and research. Applicants should send vita and three letters of recommendation to: Shair Ahmad, Chairman, Department of Mathematics & Computer Science, University of Miami, P. O. Box 249085, Coral Gables, Florida 33124.

**MILLERSVILLE UNIVERSITY OF PENNSYLVANIA**

Department of Mathematics & Computer Science: Applications are invited for a full-time tenure track position in mathematics beginning in September, 1988. Candidates must hold the Ph.D. degree in mathematics or statistics and have a strong commitment to teaching and scholarship. Teaching loads are 24 semester hours per year; released time for research is available on a competitive basis. Teaching excellence is a primary consideration. U.S. citizenship or permanent visa status required. Appointment at the assistant professor level is expected; rank and salary determined by qualifications and experience. Salary range is competitive with excellent benefits. Candidates with specialty in any field of mathematics will be considered with preference given to operations research. Applicants should send vitae and three letters of recommendation (at least one of which attests to your teaching effectiveness) to: Ronald N. Umble, Search Committee Chairman, Dept. of Math. & C.S., NTCS11/87, MILLERSVILLE UNIVERSITY, Millersville, PA 17551. Interviews begin about 2/15/88. AA/EOE.

**BARD COLLEGE**

**DEPARTMENT OF MATHEMATICS**

Applications are invited for a tenure-track position in Mathematics at Bard College for the Fall of 1988. Bard is a Liberal Arts College with a young and expanding Mathematics Department. We are seeking someone with a strong interest in building an innovative mathematics program in a liberal arts context. Candidates must have a Ph.D. by the Fall of 1988, and a commitment to teaching and continued mathematical activity. Salary and rank depending on experience. To apply, submit a resume, a statement of teaching and research interests, and 3 letters of recommendation (at least one concerning teaching) to: Prof. Ethan Bloch, Mathematics Search Committee, Box 91, Bard College, Annandale-on-Hudson, NY 12504. Deadline for applications is 2/15/88. Late applications will be considered until the position is filled. Bard College is an AA/EOE.

**The Ohio State University**

**Department of Mathematics**

**Research Instructorships in Mathematics**

Applications are invited for the position of research instructor in mathematics for the academic year 1988-89. Candidates should hold a Ph.D. (or equivalent) in mathematics and show strong research promise. Please send credentials and have letters of recommendation sent to: Professor Joseph Ferrar, Department of Mathematics, The Ohio State University, 231 W. 18th Avenue, Columbus, Ohio 43210. The Ohio State University is an Equal Opportunity/Affirmative Action Employer.

**THE UNIVERSITY OF TEXAS AT DALLAS**

**PROGRAMS IN MATHEMATICAL SCIENCES**

Applications are invited for faculty positions in Applied Mathematics. At least one position to be filled Fall, 1988. Rank open. Ph.D. in relevant field is required. Applicants for senior position must have a strong publication record; applicants for tenure track assistant professor position must demonstrate research potential. Partially fields of interest are systems and control, signal processing, and inverse scattering, and joint research with electrical engineers is encouraged. Responsibilities include research, teaching, and direction of Ph.D. dissertations. Salary competitive. CV and at least three letters of reference (indication of sex and ethnicity for Affirmative Action statistical purposes is requested but not required) to: Dr. L. R. Hunt, Academic Search #282, M/S AD11, The University of Texas at Dallas, P. O. Box 830688, Richardson, Texas, 75083-0688. Complete applications should be received by 2/15/88. AA/EOE.

**OHIO UNIVERSITY**

**Department of Mathematics**

The Department of Mathematics anticipates the appointment of four tenure-track assistant/associate professors beginning September 1, 1988. Salary will be competitive. Duties include research and teaching at the undergraduate and graduate levels. Applicants must have a Ph.D. in Mathematics and have research interests compatible with the current faculty in algebra, analysis, differential equations, or topology. For the associate professor position only exceptionally well-qualified individuals will be considered. Send resume and have three letters of recommendation sent to: Prof. Theodore L. Bloch, Chairman, Department of Mathematics, Ohio University, Athens, Ohio 45701. The deadline for applications is January 31, 1988. Ohio University is an Equal Opportunity and Affirmative Action Employer.

**DEPARTMENT OF MATHEMATICS**

**KANSAS STATE UNIVERSITY**

Subject to budgetary approval, applications are invited for a tenure-track position at the assistant professorship level commencing August 18, 1988. All fields will be considered, but preference will be given to candidates in Harmonic Analysis. Applicants must have strong research credentials and a commitment to excellence in teaching. A Ph.D. in mathematics or a Ph.D. dissertation accepted with only formalities to be completed is required. Application, detailed resume with description of research and three letters of recommendation should be sent to: Louis Magno, Head, Department of Mathematics, Cardwell Hall 137, Kansas State University, Manhattan, KS 66506.

Deadline: February 1, 1988. AA/EOE
POSITIONS AVAILABLE

RUTGERS UNIVERSITY
DEPARTMENT OF
MATHEMATICAL SCIENCES
CAMDEN, NEW JERSEY 08102

Attractive position at the assistant professor level (Tenure Track) starting July 1, 1988. Candidate must have exceptional teaching and research credentials so as to qualify for a Henry Rutgers Research Fellowship. The Fellowship allows for a very attractive salary package and teaching load. The Rutgers University Campus in Camden is just across the river from center city Philadelphia, and the general location affords a healthy research environment.

Exceptional candidates only please apply. U.S. permanent residency required. Send resume to Dr. G. A. Artico. Rutgers University is an equal opportunity employer.

Miami University, Middletown, Ohio
Department of Mathematics and Statistics

Anticipates authorization of an assistant professor (tenure track) position and an instructor position beginning in August 1988. Miami University Middletown is a two-year regional campus. Duties for the assistant professor include teaching 12 hours per semester, service and scholarship. Applicants should have a doctorate in mathematics, mathematics education or statistics by August 1988 and a strong interest in teaching. Duties for the instructor include teaching 12 hours per semester, and service. Applicants should have a master’s degree in mathematics, mathematics education or statistics. Teaching experience is desirable. Send a vita, graduate transcript and three reference letters to Professor W. A. Woyczynski, Chair. Miami University, Middletown, Ohio 45042 by February 1, 1988. Late applications may be considered. Women and minorities are encouraged to apply. AA/EOE.

UNIVERSITY OF SOUTH FLORIDA
Department of Mathematics

Tenure-track teaching and research positions are available beginning August 1988. Applicants must possess a Ph.D. degree. Applicants specializing in Approximation Theory, Discrete Mathematics (Algebra, Theoretical Computer Science), Numerical Analysis, Probability, and Statistics are preferred but other outstanding candidates will be considered. Rank and salary will depend on credentials. To apply, send curriculum vitae and three letters of recommendation to Professor A. J. Hoffman, Chair. University of South Florida, Tampa, FL 33620-5700. Application Deadline: February 10, 1988. The University of South Florida is an equal opportunity employer.

The Calvin College Department of Mathematics and Computer Science will have tenure track openings and temporary openings for the 1988-89 academic year. Applicants in Mathematics, Mathematics Education, Computer Science, and Mathematical Statistics are encouraged to apply. The department currently has 18 full-time faculty positions and nearly 100 majors at the junior-senior level. Calvin College is a Christian liberal arts college, and each faculty member is expected to demonstrate a Reformed and Christian perspective in her or his teaching and other professional activities. To apply, contact Professor T. J. Jager, Chair. Calvin College, Grand Rapids, MI 49506. Calvin College is an equal opportunity, affirmative action employer.

CASE WESTERN RESERVE UNIVERSITY
DEPARTMENT OF MATHEMATICS AND STATISTICS

Tenure-Track, possibly senior, positions anticipated to begin August 15, 1988. Outstanding research record and/or proven research potential and teaching excellence required. Preferred areas: statistics and numerical methods, but candidates in areas of global analysis, dynamical systems, control theory, probability and functional analysis will also be considered for junior positions. Women and minority groups candidates are especially encouraged to apply. Visiting positions most likely in the area of applications of probability and graph theory to chemistry. Send vita plus three letters of recommendations to Professor W. A. Woyczynski, Chair. Department of Mathematics and Statistics. Case Western Reserve University, Cleveland, OH 44106.

An affirmative action equal opportunity employer.

OCCIDENTAL COLLEGE

The Department of Mathematics invites applications for one or two regular positions beginning September 1988. Ph.D. in Mathematical Sciences required. One position is for an entry level assistant professor with expertise in computer science. Candidates expected to demonstrate excellence in teaching and active research interests. Other position open. Occidental is a liberal arts college offering A.B. in mathematics with optional computer science emphasis. Two courses per term (8-9 hours). Occidental actively supports affirmative action; applications from ethnic minorities and women strongly encouraged. Interviews at AMS meeting in Atlanta, January 1988. Send vita and three letters of reference (one on teaching) to Nalsey Tinberg, Dept. of Mathematics, Occidental College, Los Angeles, CA 90041, by March 1, 1988.

UNIVERSITY OF CALIFORNIA, IRVINE
DEPARTMENT OF MATHEMATICS
IRVINE, CALIFORNIA 92717

A position at the level of Assistant Professor available beginning academic year 1988-89. Candidates for these positions must have a Ph.D. and a research record. Duties include research, undergraduate and graduate teaching. Send applications, curriculum vitae, work in progress or in preparation, and three letters of recommendation to Professor and Chairman. Department of Mathematics, University of California, Irvine, CA 92717. Appointments begin on July 1, 1988. U.C. Irvine is an Affirmative Action/Equal Opportunity Employer.

ILLINOIS STATE UNIVERSITY
Department of Mathematics

Illinois State University has two tenure track positions in mathematics. Applicants should have a Ph.D. by August 1988, a research interest in the areas of analysis, graph theory, or algebra; and a strong research record or research potential. Candidates should also have sufficient background to teach undergraduate mathematics in a variety of areas. To ensure consideration send vita, three letters of recommendation and official transcripts by February 1 to: Dr. Jane O. Swafford, Department of Mathematics, Illinois State University, Normal, IL 61761. State law mandates demonstrable oral proficiency in the English language as a requirement for this position. AA/EOE Employer.
POSITIONS AVAILABLE

University of Toronto
Department of Mathematics

Applications are invited for a tenure-stream position in Applied Mathematics at the level of Assistant Professor. This position is subject to final budgetary approval and is to begin July 1, 1988. The University of Toronto encourages both men and women to apply.

Candidates must have a Ph.D. and demonstrate clear strength in both research and teaching. Priority will be given to candidates of exceptional promise working on functional analysis problems in their field.

Applicants should send their complete curriculum vitae, together with a list of publications and arrange to have at least three recent letters of reference sent directly to:

Professor D. R. Masson
Associate Chairman
Department of Mathematics
University of Toronto
Toronto, Canada M5S 1A1

To insure full consideration, applications and letters of reference should be received by February 15, 1988.

CHAIR OF PURE MATHEMATICS

Applications are invited for a Chair in the Department of Pure Mathematics. The other Chair in the department is held by Professor C. T. C. Wall Ph.D., currently holder of a SERC Senior Fellowship from 1983 to 1988.

The department has an excellent international reputation and attracts considerable research funding. It works closely with the Departments of Applied Mathematics, Theoretical Physics, Statistics and Computational Mathematics. Applications are welcome from candidates who have an outstanding research record and whose research has possibilities of interaction with current departmental work.

The salary will be within the range approved for non-clinical professorial salaries, currently not less than £23,105 per annum.

Applications, together with names of three referees, should be received not later than 21 January 1988, by the Registrar, The University, P. O. Box 147, Liverpool L69 3BX, U.K., from whom further particulars may be obtained.

Quote ref RV/623. An equal opportunity employer.

THE UNIVERSITY OF MISSOURI-ST. LOUIS

Applications are invited for a tenure-track assistant professorship in statistics. Qualifications include a Ph.D. degree, evidence of good teaching skills, and strong research potential. The primary duties of the position are teaching and conducting a high quality research program in statistics. The current teaching load is two courses per semester. The ability to teach one or more computer science courses would be advantageous to a candidate. Send resume and at least three letters of reference to Grant Welland, Chairman of the Search Committee, Department of Mathematics and Computer Science, University of Missouri-St. Louis, 8001 Natural Bridge Road, St. Louis, Missouri 63121-4499. The University of Missouri-St. Louis is an Equal Opportunity/Affirmative Action Employer.

ARIZONA STATE UNIVERSITY
Department of Mathematics

The Department of Mathematics invites applications for tenure-track, visiting, and faculty associate positions at all ranks and in all areas of mathematics beginning in August of 1988. All tenure-faculty positions require an earned doctorate and involve teaching, research, and service responsibilities commensurate with the policy of the Arizona Board of Regents which calls for Arizona State University to “continue development as a major research university” and “to become competitive with the best public universities in the nation”. Visiting faculty appointments will be considered for candidates whose research interests support and reinforce the research activities of the regular faculty. Faculty Associate positions are available for candidates who hold at least a Masters Degree in Mathematics or a related field and have an outstanding record in teaching.

Over the next five year period, the Department of Mathematics will embark on a major development program which will result in a substantial increase in both the size of the department and the quality of its research and instructional programs. Through this development process, the department intends to build nationally recognized research groups of four to seven faculty members in targeted areas: Computational Mathematics, Differential Equations (including PDE's), Discrete Mathematics, Dynamical Systems, Operator Theory, and Systems and Control. Outstanding candidates in other areas of specialization including both pure and applied disciplines will also be considered when such an appointment reinforces existing strengths in the Department.

We anticipate that the majority of the tenure-track appointments will be made at the Assistant Professor level. For such an appointment, a candidate must have demonstrated potential for outstanding research while providing effective teaching at both the undergraduate and graduate level in a public university environment. For candidates at the Associate Professor level, additional requirements include a proven record of outstanding research accomplishments and versatile and effective teaching. At the Full Professor level, applicants should be recognized nationally for the quality and scope of their scholarly research and their leadership activities in their area of specialization. Salaries are competitive and commensurate with experience and qualifications.

Arizona State University has over 42,000 students and is located in the rapidly growing Phoenix Metropolitan area — a center of business, finance, and high technology. The valley offers a wide range of educational, cultural and recreational opportunities. Pleasant and convenient housing is widely available near the university campus.

Applications should be received by January 15, 1988. This deadline will be extended if all available positions are not filled. The Department will begin to review applications on January 1. 1988.

Applicants should send their resume and arrange for at least three letters of recommendation to be sent to: William T. Trotter, Chair, Department of Mathematics, Arizona State University, Tempe, AZ 85287.

Arizona State University is an Equal Opportunity/Affirmative Action Employer and does not discriminate on the basis of sex, race, religion, color, national origin, age, disabled or Vietnam-era veterans status, or disability in its admission, employment or educational programs or activities. Women and minorities are encouraged to apply.
THE UNIVERSITY OF MISSOURI-ST. LOUIS

The Department of Mathematics and Computer Science seeks applicants for two, possibly three tenure-track positions in computer science beginning in Fall 1988.

It is our intention to fill these positions with people having overlapping research interests that are also shared by one or more members of our present faculty. Areas that are presently under consideration are Algorithms and Complexity, Database Design, Numerical Analysis, and Denotational Semantics of Programming Languages.

Applications are encouraged from women, persons from racial minorities, and from individuals who have the potential for research and quality teaching. Priority will be given to candidates whose research interests interface well with the research strengths of the department. Send vita and three letters of recommendation to Jerrold Siegel, Chairman, Department of Mathematics and Computer Science, University of Missouri-St. Louis, 8001 Natural Bridge Road, St. Louis, Missouri 63121-4499. The University of Missouri-St. Louis is an Equal Opportunity/Affirmative Action Employer.

Department of Mathematics and Statistics
University of Nebraska-Lincoln
Lincoln, NE 68588-0323

Tenure-track positions at the Assistant Professor level are presently under consideration. Areas of interest include Algorithms and Complexity, Database Design, Numerical Analysis, and Denotational Semantics of Programming Languages.

Applications should be sent to: Jerrold Siegel, Chairman. Department of Mathematics and Statistics, University of Nebraska-Lincoln, Lincoln, NE 68588-0323. Women and minorities are especially encouraged to apply.

SOUTHERN ILLINOIS UNIVERSITY
AT EDWARDSVILLE

Chair, Mathematics and Statistics

Applications and nominations are invited for the position of Chair of the Department of Mathematics and Statistics. Applicants should have a doctorate in Mathematics or Statistics, a record of successful teaching and research in Mathematics or Statistics, strong leadership and communication skills, and a commitment to promoting research, teaching, and other creative activities.

The Department of Mathematics and Statistics is part of the School of Sciences, which includes departments of biology, chemistry, physics, and computer science. At present, the Department has 18 faculty members, 90 undergraduate majors, and 45 master's candidates.

The University occupies a beautiful 2,600 acre campus in the St. Louis metropolitan area. Current enrollment is approximately 10,000 students, the majority of whom are residents of the area.

Initial screening of candidates will begin February 1, 1988, and continue until the position is filled. The earliest appointment date is September 1, 1988. Rank and salary will be commensurate with qualifications and experience. Send nominations and letters of application to Chair Search Committee, Department of Mathematics and Statistics, Southern Illinois University at Edwardsville, Edwardsville, IL 62026-1653. SIUE is an Affirmative Action, Equal Opportunity Employer.

UNIVERSITY OF WATERLOO
DEPARTMENT OF PURE MATHEMATICS

The Department of Pure Mathematics at the University of Waterloo invites applications for a tenure-track position at the level of Assistant Professor beginning in Fall 1988. This position is subject to budgetary approval. Applicants should have a Ph.D. in an area of pure mathematics and demonstrate strong research potential. Duties will include research and teaching at all levels. Salary will depend on the candidate's qualifications. In order for an application to be complete, a curriculum vitae of the candidate, and three letters of reference, sent directly from the referees, are required. The deadline for applications is January 15, 1988. In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. Applications should be sent to: Dr. F. A. Zorzitto, Chairman. Department of Pure Mathematics, University of Waterloo, Waterloo, Ontario, N2L 3G1.

UNIVERSITY OF SOUTH ALABAMA
DEPARTMENT OF MATHEMATICS AND STATISTICS

Tenure-track position at the Assistant Professor level starting September 1, 1988. Applicants must have a Ph.D. in Mathematics (earned or anticipated by appointment date). Strong research potential and a commitment to excellence in teaching are required. Preference given to fields complementing existing research specialties and areas of applied mathematics. Closing date: January 15, 1988. Please send detailed resume and three letters of recommendation to Dr. Suzanne McGill, Chair, Department of Mathematics and Statistics, University of South Alabama, Mobile, AL 36688. An Equal Opportunity/Affirmative Action Employer.

MATHEMATICS AND STATISTICS: Tenure-track position anticipated (subject to funding) beginning August 1988. Ph.D. in Mathematics is required with interest in Applied Mathematics. To teach undergraduate and graduate courses. Salary and rank commensurate with qualifications. Send resume, transcripts and three letters of reference to:

Dr. Daniel B. McCallum
Department of Mathematics and Statistics
University of Arkansas at Little Rock
2801 South University
Little Rock, AR 72204

The University of Arkansas at Little Rock is an affirmative action, equal opportunity employer and actively seeks the candidacy of minorities and women.

University of Virginia
Department of Applied Mathematics

Tenure-track assistant professorships and senior positions for January 1988, and later. Preferred areas are scientific computing and optimization. Ph.D. required with strong research and teaching ability. Applicants for senior positions must have established record of research and grant support. Send vita and names of three references to James M. Ortega, Chairman, Applied Mathematics, Thornton Hall, University of Virginia, Charlottesville, VA 22903. An EO/AA Employer.

1345
POSITIONS AVAILABLE

CHAIRPERSON: The University of Arkansas at Little Rock, Department of Mathematics and Statistics, invites applications for the position of Chairperson. Candidates with a strong record of research in an area of specialization within any field of mathematics or statistics are encouraged to apply. Should have an earned doctorate or equivalent, strong record of teaching, research, service, and managerial experience. Facilitates interaction with other institutions and organizations. Twelve month appointment, rank and salary commensurate with qualifications. Applications and nominations will be accepted until a suitable candidate is chosen. Send curriculum vitae, and names, addresses and telephone numbers of at least three references to:

Dr. Robert Franke
Chair, Search Committee and
Dean, College of Sciences
University of Arkansas at Little Rock
2801 So. University Avenue
Little Rock, AR 72204

The University of Arkansas at Little Rock is an affirmative action equal opportunity employer and actively seeks the candidacy of minorities and women.

Colby College invites nominations and applications for the Carter Professor of Mathematics and Chair of the Mathematics Department. Appointment begins September 1, 1988. A Ph.D. in one of the mathematical sciences is required. Desirable qualifications include a distinguished record as a teacher and scholar, demonstrated departmental and college leadership, including the ability to nurture faculty development and research programs, and commitment to the liberal arts and undergraduate mathematics education. Salary and rank commensurate with qualifications and experience.

Colby is a highly selective, residential liberal arts college of 1700 students and 140 faculty members. The Mathematics Department, including computer science and statistics, has 9 FTEs.

Search and selection procedures will be closed when a sufficient number of qualified candidates have been identified, but not earlier than January 15, 1988. Please forward Applications (including letter of application, resume, list of references, and nominations to H. T. Hayslett Jr., Chair, Mathematics Department, Colby College, Waterville ME 04901.

Colby is an AA/EO employer and specifically encourages applications from minorities and women.

FOR SALE


Math/Stats Library: List from R. Chesters, Suite 1900, 2 First Canadian Place, Toronto, Canada M5X 1E3.

GALOIS ALGEBRA MICROCOMPUTER PACKAGE

for IBM PC or compatibles. The GALOIS package can be used for teaching or research in algebra, number theory and applications in computer science, combinatorics and engineering with emphasis on modular arithmetic, and matrices and polynomials over finite fields or integers mod n. GALOIS for single use $US115; site license for departments $US440 (includes postage).

Order from: Department of Mathematics, University of Tasmania, Hobart, Tasmania 7001, AUSTRALIA

STATEMENT OF OWNERSHIP AND MANAGEMENT

Notices of the American Mathematical Society is published monthly in January, February, April, June, August, October, November, and December of each year by the American Mathematical Society. The Office of Publication and the General Business Office are located at 201 Charles Street, Providence, Rhode Island 02904. The Publisher is the American Mathematical Society. The Managing Editor is James A. Voytuk, American Mathematical Society, P.O. Box 6248, Providence, RI 02940. There are no bondholders, mortgagees or other security holders. Extent and Nature of Circulation. Average number of copies of each issue during the preceding twelve months: total number copies printed: 22,500; sales through dealers and carriers, street vendors and counter sales: 100; paid mail subscriptions: 21,596; total paid circulation: 21,696; samples, complimentary and other free copies: 133; total distribution: 21,808; office use, left over, unaccounted, spoiled after printing: 692; copies distributed to news agencies but not sold: 0; total: 22,500. Actual number of copies of single issue published nearest to filing date: same as above.

Second class postage is paid at Providence, Rhode Island.

Volume 34, Number 8, December 1987 Pages 1217–1360.

Copyright © 1987 by the American Mathematical Society

US ISSN 0002-9920
Index

Volume 34 (1987)

The pages of the eight issues of Notices for 1987 are:
January: 1–224
February: 225–432
April: 433–600
June: 601–728

January: August: 729–872
February: October: 873–1064
April: November: 1065–1216
June: December: 1217–1360

ACKNOWLEDGEMENT OF CONTRIBUTIONS, 641
ADVERTISING POLICY, Recruitment, 174, 844
AMS REPORTS & COMMUNICATIONS, 146, 395, 569, 699, 827, 1012, 1154
Business Meetings of the Society
January, San Antonio, 397
Committee Appointments, 146, 395, 569, 699, 827
Council Meetings of the Society
January, San Antonio, 397; April, Newark, 699, 1012; August, Salt Lake City, 1013
Election Results of 1986, 399
Funds, Prizes, Officers and Lecturers, 1160
Officers and Committee Members of the Society, 828
Officers of the Society, 1986 and 1987, 570
Open Letter to the Membership, 395
Recent Appointments, 146, 395, 569, 699, 827, 1012, 1154
Report from the Committee on Human Rights of Mathematicians, 569, 827
Berkeley Mathematician Imprisoned in Turkey, 569
Mathematics Student Imprisoned in Chile, 827
Reports of Past Meetings, 147, 395, 396, 699, 1012, 1154
November Meeting in Columbia, 395
April Meeting in Indianapolis, 396
October Meeting in Logan, 147
October Meeting in Denton, 396
March Meeting in Honolulu, 699
April Meeting in Newark, 1012
June Meeting in Tacoma, 1154
Statistics on Women Mathematicians Compiled by the AMS, 700

AMS SHORT COURSE SERIES:
1989: Call for Topics, 356, 547, 679, 809
Moments in Mathematics, San Antonio, 51
Computational Complexity Theory, Atlanta, 954, 987, 1121

AMENDMENTS TO THE BYLAWS, 1155
ARTICLES, General (See For Your Information, Mathematical Software, Mathematical Text Processing, and Washington Outlook for articles in columns)
An AMS-MAA-SIAM Congressional Fellow’s Report: Mathematics on Capitol Hill, 460
Call for Russian Translators, 1071
Chairman Fuqua’s Legacy, 285
Challenges to the Mathematics Community, 245
Community Says “Thank You,” A, 625
Computing in Undergraduate Mathematics, 917
Document Production: Visual or Logical?, 621
Education: National Leadership from Our Community, 33
Funding Sources for Mathematicians, 449
Highlights of the Meeting of the NSF Advisory Committee for the Mathematical Sciences, 603

International Comparisons of Mathematics Education: Problems and Insights, 282
Interview with John Polking, An, 731
Mathematical Sciences in the FY 1986 Budget, 499
NSF Budget Request for Fiscal 1988, 435
Once in a Hundred Years, 1107
Passages: Thoughts About Science and the Public, 492
Report of the Boston Computer Society, Part I, 15
Report of the Boston Computer Society, Part II, 262
Report of the Boston Computer Society, Part IIIB, 462
Report of the Committee on American Graduate Mathematics Enrollments, 748
Report of the Science Policy Committee, 235
Report on the 1987 Survey of New Doctorates, 1081
Science Policy Committee Recommendations, 448
Science and Technology Centers; New Opportunities for Research Support in the Mathematical Sciences, 879
Supercomputers and the NSF, 9
The Meeting You Missed, 1102
University Support for Mathematical Research, 1067

ARTICLES, Prizes Awarded by the Society
1987 Cole Prize, 232
1986 Steele Prizes, 227
1987 Steele Prizes, 875

ARTICLES, Special
Factors for Polynomials Quickly, 3

ASSISTANTS AND FELLOWSHIPS
In the Mathematical Sciences, In 1988–1989, 1219
In 1987–1988 (Supplementary List), 375
Critical, Historical, or Expository Theses, 1305
( Supplementary List), 387
Deadlines for Grants and Assistantships, 1010, 1151
Foreign Language Requirement for Ph.D., 1309
Fulbright and Other Grants, 904
Graduate Support, 1313
MacArthur Fellowships, 902
NRC Offers Ford Foundation Fellowships for Minorities, 1112
ONR Graduate Fellowships, 1111
Postdoctoral Positions Research or Research/Teaching, 1988–1989, 1307
Postdoctoral Research Fellowships and/or Instructorships 1967–1988, (Supplementary List), 387

Stipends for Study and Travel, 1313

AUTHORS of articles and columns
Axler, Sheldon, 1102
Connors, Edward A., 1081
Gilfeather, Frank, 1067
Goldstein, Richard, 15, 262, 462
Graham, Richard, 15, 262, 462
Hoffman, Kenneth M., 33, 285, 492, 625, 898, 1107
Jackson, Allyn, 9, 282, 449, 603, 731, 879
Johson, Allyn, 621
Landau, Susan, 3
Loomis, James, 15, 262, 462
Mostow, G. D., 1071
Murphy, James, 460
Palais, Richard S., 15, 262, 462, 621
Tetensky, Avram, 15, 262, 462

1347
Zorn, Paul, 917

BACKLOG OF MATHEMATICS RESEARCH JOURNALS, 373

BUSINESS MEETINGS OF THE SOCIETY
March, New Orleans, 406; August, Baltimore, 679

CLASSIFIED ADVERTISEMENTS, 148, 400, 572, 703, 845, 1016, 1169, 1335

COMMENTARY ON DEFENSE FUNDING, 616, 737, 895, 1103
Cotlar, Mischa, 1105
Davis, Chandler, 1103
Dediu, Michael M., 738
Glimm, James, 619
Harme, Jorgen, 738
Katz, Mikhail, 895
Lax, Peter D., 896
Parter, Seymour V., 618
Rudin, William, 572
Wegman, Edward J., 616

COMMITTEE ON EMPLOYMENT AND EDUCATIONAL POLICY, 1218
CORPORATE MEMBERS AND INSTITUTIONAL ASSOCIATES, 641

COUNCIL MEETINGS
March, New Orleans, 399; August, Baltimore, 679

CRITICAL, HISTORICAL, OR EXPOSITORY THESSES, 1305
Supplementary List, 387

DEATHS OF MEMBERS OF THE SOCIETY, 144, 372, 695, 823, 1148 (See also Obituaries)
Aronson, Donald G. Salt Lake City, 761
Bertram, Edward A. Honolulu, 307
Culler, Marc San Antonio, 49
Dafermos, Constantine M. Atlanta, 956
DiPerna, Ronald J. San Antonio, 956
Durrett, Richard T. San Antonio, 49
Dwyer, William G. Kent, 319
Elliott, David J. Salt Lake City, 761
Goresky, Robert J. Atlanta, 956
Grinbaum, Branko Tacoma, 667
Gudkov, Victor W. (Colloquium Lecturer), Atlanta, 951
Hilton, Philip J. Atlanta, 956
Hardt, Robert M. San Antonio, 49
Jerison, David Salt Lake City, 761
Karcher, Steven Salt Lake City, 761
Kohn, Robert V. Newark, 951
Kreiss, J. L. San Antonio, 49
Lenstra, H. W., Jr., Atlanta, 956
Loeb, Peter Kent, 319
McDuff, Dusa Atlanta, 956
McEliece, Robert J. San Antonio, 49
Mueller, Antoni Balcarce, 307
Nussbaum, Roger D. Atlanta, 956
Parthasarathy, Sridhar Salt Lake City, 761
Parthasarathy, Sridhar Salt Lake City, 761
Rivlin, Robert S. Raleigh, 307
Roberts, Paul C. Salt Lake City, 761
Rudolfo, Rodolfo R. Newark, 331
Ruelle, David P. (Gibbs Lecturer) Atlanta, 951
Saltman, David J. San Antonio, 49
Sarnak, Peter Clive Atlanta, 956
Schwarz, Joel Salt Lake City, 761
Sibner, Leslie M. San Antonio, 49
Speh, Birgit Newark, 331
Zorin, Denis, 917
Zorn, Paul, 917

Rodi, Bernhard A., 823
Scheid, Ernst, 372
Shok, Thurston, 372
Zorn, Paul, 917

Tracewell, Theodore N., 372
Usdin, Eugene, 823
Vogt, Glenn G., 372
Welch, Felix P., 372
Zabrodsky, Alexander, 695

DOCTORAL DEGREES CONFERRED
In 1985–1986, (Supplementary List), 261, 1101
In 1986–1987, 1087

ELECTION INFORMATION (AMS), 304, 510, 664, 760, 928
1987 Election Information, 760
Candidates, AMS Election 1987, 928
Council Nominations for Vice-President and Members-at-Large, 759
Election Results of 1986, 399
Nominating Committee for 1988, 304, 510, 664
President’s Candidates for the Nominating Committee 1987 and 1988, 759
Nomination Petition for 1987 Election, 305, 511, 665
Nominations for Vice-President or Member-at-Large, 759
Replacement Ballots, Rules and Procedures, 304, 510, 664
Suggestions for 1988 Nominations, 760
Vice-President or Member-at-Large, 304, 510, 664

EMPLOYMENT REGISTER
(See Mathematical Sciences Employment Register)

FOREIGN LANGUAGE REQUIREMENT FOR PH.D., 1309

INVITED SPEAKERS, Lists of, 123, 344, 544, 675, 805, 900, 1126
Aronson, Donald G. Salt Lake City, 761
Bertram, Edward A. Honolulu, 307
Culler, Marc San Antonio, 49
Dafermos, Constantine M. Atlanta, 956
DiPerna, Ronald J. San Antonio, 49
Durrett, Richard T. San Antonio, 49
Dwyer, William G. Kent, 319
Formanek, Edward W. Salt Lake City, 761
Goresky, Robert J. Atlanta, 956
Grinbaum, Branko Tacoma, 667
Gudkov, Victor W. (Colloquium Lecturer), Atlanta, 951

Hilton, Philip J. Atlanta, 956
Hardt, Robert M. San Antonio, 49
Jerison, David Salt Lake City, 761
Karcher, Steven Salt Lake City, 761
Kohn, Robert V. Newark, 331
Kreiss, J. L. San Antonio, 49
Lenstra, H. W., Jr., Atlanta, 956
Loeb, Peter Kent, 319
McDuff, Dusa Atlanta, 956
McEliece, Robert J. San Antonio, 49
Mueller, Antoni Balcarce, 307
Nussbaum, Roger D. Atlanta, 956
Parthasarathy, Sridhar Salt Lake City, 761
Parthasarathy, Sridhar Salt Lake City, 761
Rivlin, Robert S. Raleigh, 307
Roberts, Paul C. Salt Lake City, 761
Rudolfo, Rodolfo R. Newark, 331
Ruelle, David P. (Gibbs Lecturer) Atlanta, 951
Saltman, David J. San Antonio, 49
Sarnak, Peter Clive Atlanta, 956
Schwarz, Joel Salt Lake City, 761
Sibner, Leslie M. San Antonio, 49
Speh, Birgit Newark, 331

1348
LETTERS TO THE EDITOR, 39, 300, 502, 637, 754, 924

Bechtell, Homer, 756
Boas, R. P., 302
Calogero, Francesco, 508
Clemens, Herbert, 638
Cullinan, Steven H., 924
Davis, Chandler, 506, 637
Dray, Tevian, 509
Eisenbud, David, 755
Fleming, Wendell, 502
Friedlin, Mark, 924
Green, Judy, 302
Green, Paul S., 302
Griffiths, Phillip A., 301
Gurevich, R., 637
Hughes, Rhonda J., 637, 754
Johnston, Samuel B., 505
Keen, Linda, 754
Kohlmayer, Gerhard F., 639
Lang, Serge, 507
Lax, Peter D., 301
Leslie, Joshua A., 302
Pinsky, Mark, 509
Mac Lane, Saunders, 503
Markus, Lawrence, 506
Rubel, Lee A., 755
Singer, I. M., 504
Smarandache, Florentin, 924
Stakgold, Ivar, 300
Thurston, Bill, 39
Weiss, David M., 638
York, James A., 45, 757

MATHEMATICAL SCIENCES EMPLOYMENT REGISTER, 77, 983, 986
Preregistration Forms, 1055, 1207

MATHEMATICAL SOFTWARE
None so far in 1987

MATHEMATICAL TEXT PROCESSING, 15, 262, 462, 621

Document Production: Visual or Logical?, 621
Technical Wordprocessors for the IBM PC and
Compatibles, Report by the Boston Computer
Society: Part I—TWP Capabilities and People
Needs, 15
Technical Wordprocessors for the IBM PC and
Compatibles, Report by the Boston Computer
Society: Part II—TWP Summary Tables, 262
Technical Wordprocessors for the IBM PC and
Compatibles, Report by the Boston Computer
Society: Part II—Reviews, 462

MEETINGS OF THE AMS

Calendar of AMS Meetings, Inside Front Covers
Call for Topics, 355, 546, 678, 808
Invited Speakers at AMS Meetings, 123, 344, 544, 675, 805, 990, 1126
Meeting Announcements and Programs
MacArthur Fellowships, 902
Manuscripts in AMS-Tex Will Speed Up Publication Process, 495
Marchuk Elected President of the Academy of Sciences of the U.S.S.R., 34
Math Awareness Week 1987, 292
Mathematical History, 627, 742, 905, 1112
Mathematical Community, To the, 289
Mathematical Sciences Research Institute (Berkeley), 35, 629
Milnor to Give Pitcher Lectures, 743
Mosteller Receives R. A. Fisher Lectureship and Award, 1110
NAS Award, 904
National Chairmen's Colloquium 1987, 743, 916
National Conference on Undergraduate Research, 293
Newly Elected Members of the American Academy, 743
Newly Elected Members of the National Academy of Sciences, 630
News from the Institute for Mathematics and Its Applications, (University of Minnesota), 291, 495, 903, 1111
News from the Mathematical Sciences Institute (Cornell), 34, 628
NRC Offers Ford Foundation Fellowships for Minorities, 1112
ONR Graduate Fellowships, 1111
Ostrowski, Alexander M., 1893-1986, 288
Pitcher Lectures, 292
Pollard, Harry, 1919-1985, 289
Prix Scientifique 1986, 34
Reciprocity Agreement, 907
Reiner, Irving, 1924-1986, 287
Request for Photos, 630, 743
Rolio Davidson Trust, 627
Salem Prize Awarded to David and Journé, 741
Sixth International Congress on Mathematical Education, 293, 1112
Sloan Research Fellowships Awarded, 494
Special Program/Workshop for Department Chairs, 497
Symposium on the Future of Calculus, 744
Television Program Promotes Mathematics, 294
TEx Users Group's Annual Conference and Regional Courses, 628
Theoretical and Applied Mathematics, 35
Travel Support for Foreign Graduate Students, 292
U.S.-China Exchange Program, 905
U.S. Math Olympiad Winners Announced, 742
U.S. Team Places Fifth in International Math Olympiad, 906
Wolf Prize Awarded to Ito and Lax, 286
NEWS & REPORTS FROM THE NSF, 36, 295, 498, 631, 745, 908, 1115 (Also see Prizes and Awards, Prize Recipients)
Advisory Committee Meeting, 911
Centers Program Announced, 909
Committee Examines NSF Review Procedures, 298
Computational Mathematics Program at the NSF, 36
Computer Addresses for DMS Program Officers, 297
Computing Research Equipment for the Mathematical Sciences, 909
Cornell to Receive Supercomputer Upgrade, 746
DMS Staff, 911
Electronic Information Exchange, 36
Employment of Ph.D. Scientists and Engineers, 633
Experimental Computer Research Facilities, 1117
FY 1988 NSF Budget Request, 297
Good News for DMS Budget, 37
Graduate Fellowship Awards Announced, 631
Grants to Assist Innovative Small Businesses, 745
Increase in S/E Doctorates to Foreign Citizens, 910
Industry/University Cooperative Research Centers, 1116
Institutional Infrastructure Program Expansion, 747
New DMS Director Announced, 633
New Office for Undergraduate Science, Engineering, and Mathematics Education, 1118
New Program for Undergraduates, 297
Nominations Sought for Waterman Award, 908
NSF Announces Mathematical Sciences Postdoctoral Research Fellowships, 295
NSF-CBMS Regional Conferences in the Mathematical Sciences, 296, 498, 633
NSF-NATO Postdoctoral Fellowships Awarded, 631, 746
NSFnet Adds Two Regional Networks, 37
NSF Seeks Proposals for the 1989 Regional Conference Series in Mathematical Sciences, 745
Open Letter for the New DMS Director, 1115
Polik Awarded Meritorious Service Award, 908
Positions Open in NSF, 746
Postdoctoral Research Fellowships, 746, 908
Presidential Young Investigators Competition 1988, 632
Presidential Young Investigators Named, 295
Proposals for the NSF Division of Mathematical Sciences, 498
PYI Competition for 1988, 295
Reagan Announces National Science Board Nominees, 36, 299
Remote Access to Science Resources Studies Data, 37
Research Opportunities for Minority Scientists and Engineers, 498
Telephone Number Changed for Adams and Boyle, 746
Trends in Graduate S/E Enrollment, 912
Undergraduate Students to Participate in Research, 911
Visiting Professorships for Women, 746
Waterman Award Increased, 298
NEWS FROM WASHINGTON, 46, 913
Applications Sought for Senior and Postdoctoral Research Associateships, 46
BMS Activities, 915
Calculus Teaching Reform Conference, 915
NAS Scientific Exchange Program with the U.S.S.R. and Eastern Europe, 46
National Chairmen's Colloquium, 916
National Medals of Science Awarded, 913
New Director of Scientific Computing at DOE, 915

OBITUARIES
Will no great mathematician die this year?
OFFICERS AND COMMITTEE MEMBERS OF THE SOCIETY, 828
OFFICERS OF THE SOCIETY 1986 AND 1987, 570
ORGANIZERS AND TOPICS OF SPECIAL SESSIONS
Lists of, 123, 344, 544, 675, 805, 990, 1126
PERSONAL ITEMS, 144, 372, 699, 823, 1007, 1148
PRIZES AND AWARDS
ACM A.M. Turing Award (1986), Hopcroft and Tarjan Receive, 286
ACM A.M. Turing Award (1987), Cocke Receives, 1110
AMS Postdoctoral Research Fellowship, 626
Courant Institute Prize for Mathematical Talent, 34
Fisher Lectureship and Award, Mosteller Receives, 1110
Fulbright Awards for 1986-1987, 290
Guggenheim Fellowships Awarded, 627
King Faisal International Prize (1987), Michael Atiyah Awarded, 494
NAS Award, 904
National Medals of Science Awarded, 913
Nominations Sought for Waterman Award, 908
Presidential Young Investigators Named, 295
Prix Scientifique 1986, 34
Rollo Davidson Trust, 627
Salem Prize Awarded to David and Journé, 741
USAMO (U.S.A. Mathematical Olympiad) Winners Announced, 742
Wolf Prize Awarded to Ito and Lax, 286

PRIZE RECIPIENTS

Anderson, Christopher R., 295, 494
Anderson, Richard, 295
Araiz, Michael J., 295
Asner, Bernard A., 290
Atiyah, Sir Michael Francis, 494
Ayoub, Raymond G., 290
Bernstein, Daniel J., 742
Berwick, Robert C., 627
Blum, Avrim, 34
Bonahon, Francis, 494
Bott, Raoul, 913
Brown, Austin R., Jr., 290
Brown, James W., 290
Calhoun, Myron A., 290
Chorin, Alexander Joel, 627
Clozel, Laurent, 295
Cocke, John, 1110
Cook, Matthew M., 742
Cornez, Richard N., 290
Daverman, Robert J., 290
David, Guy, 741
Dennis, John E., Jr., 290
Dietterich, Thomas G., 295
Efrat, Isaac Y., 494
Eilenberg, Samuel, 878
Falk, James E., 290
Federer, Herbert, 876
Finn, Robert, 290
Flajolet, Phillipe, 34
Fleming, Wendell, 876
Fogelson, Aaron L., 494
Folk, Michael J., 290
Freed, Denise, 34
Freedman, Michael, 914
Gao, L. Zhiyong, 494
Gardner, Martin, 875
Gelernter, David, 295
Gilkey, Peter B., 290
Goldberg, Lisa R., 494
Goldfeld, Dorian M., 232
Goldman, William M., 494
Golub, Gene H., 627
Goldwasser, John L., 290
Goodman, Sue E., 290
Goodwillie, Thomas G., 494
Gross, Benedict H., 232
Hahn, Kyong T., 290
Hain, Richard, 626
Halais, Antony S., 290
Hanlon, Philip J., 295
Harris, Joseph D., 627
Hochberg, Kenneth J., 290
Hof, Helmut, 494
Hopcroft, John, 286
Hopkins, Michael J., 295, 494
Husch, Lawrence S., 290
Ito, Kiyoshi, 286
Jacob, Bill, 626
Jardine, J. F., 494
Jie-Zhong, Zou, 627
Journé, Jean-Lin, 741
Kahn, Jeremy A., 742
Kalman, Rudolf E., 227
Kanellakis, Paris C., 494
Katz, Nicholas M., 627
Knuth, Donald E., 227
Kolmer, Shirley, 290
Lax, Peter D., 286
Lee, Rocky, 742
Lepowsky, James, 627
Lester, Frank H., 290
LeVeque, Randy J., 295
Lepowsky, James, 627
Liu, Chung Laung, 627
Ludwig, David A., 290
Ma, Fai, 295
Mac Lane, Saunders, 227
Mangel, Marc, 627
Mosteller, Frederick, 1110
Nagel, Alexander, 627
Newman, William I., 627
Ocneanu, Adrian, 494
Olshen, Richard A., 627
Polking, John C., 908
Ran, Ziv, 494
Ratner, Marina, 627
Reed, Daniel A., 295
Schacher, Murray M., 290
Schmid, Willfried, 34
Schneeberger, William A., 742
Sellke, Thomas M., 295, 494
Semmes, Stephen W., 295, 494
Sethian, James A., 295
Shafer, Douglas S., 290
Shatah, Jalal M. I., 494
Shaw, Alan C., 290
Shmoys, David B., 295
Silverman, Joseph H., 494
Skatof, Daniel D., 295
Souganidis, Panagiotis E., 295
Springsteel, Frederick N., 290
Takacs, Murad S., 627
Tarjan, Robert, 286
Vakh, Ravi D., 742
Vandervelde, Samuel K., 742
Vazirani, Umesh V., 295
Waite, Merwin L., 290
Weinberger, Joseph H., 494
Weinberger, Shmuel, 494
Wellner, Jon A., 627
Joint Mathematics Meetings

January 6–9, 1988
Atlanta, Georgia
### EDITIONS JACQUES GABAY

**ORDER FORM**

Order from your local bookseller or directly from

**LIBRAIRIE JACQUES GABAY**

151 bis, rue Saint-Jacques - 75005 PARIS (FRANCE)

Téléphone : (1) 43 54 64 64 - Télex : 203 521 F

*Please send me:*

<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>ISBN</th>
<th>Quantity (France)</th>
<th>Quantity (All other countries)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ludwig Boltzmann</td>
<td><em>Leçons sur la théorie des gaz</em></td>
<td>2 87647 004 7</td>
<td>324 F</td>
<td>363 F</td>
</tr>
<tr>
<td>Léon Brillouin</td>
<td><em>Les tenseurs en mécanique et en élasticité</em></td>
<td>2 87647 003 9</td>
<td>243 F</td>
<td>273 F</td>
</tr>
<tr>
<td>Stephen C. Kleene</td>
<td><em>Logique mathématique</em></td>
<td>2 87647 005 5</td>
<td>270 F</td>
<td>303 F</td>
</tr>
<tr>
<td>Tranjan Lesesco</td>
<td><em>La géométrie du triangle</em></td>
<td>2 87647 007 1</td>
<td>135 F</td>
<td>152 F</td>
</tr>
<tr>
<td>Henri Lebesgue</td>
<td><em>Leçons sur les constructions géométriques</em></td>
<td>2 87647 002 0</td>
<td>198 F</td>
<td>222 F</td>
</tr>
<tr>
<td>André Lichnerowicz</td>
<td><em>Éléments de calcul tensoriel</em></td>
<td>2 87647 000 4</td>
<td>96 F</td>
<td>108 F</td>
</tr>
<tr>
<td>Ernst Mach</td>
<td><em>La Mécanique</em></td>
<td>2 87647 006 3</td>
<td>333 F</td>
<td>373 F</td>
</tr>
<tr>
<td>Henri Poincaré</td>
<td><em>Calcul des probabilités, 2e édition</em></td>
<td>2 87647 001 2</td>
<td>216 F</td>
<td>242 F</td>
</tr>
</tbody>
</table>

*Shipping and handling per book*  
France 216 F  
All other countries 242 F

**Price are in French francs and are subject to change without notice.**

Payment in French Francs only (FF)

- [ ] Check payable to LIBRAIRIE JACQUES GABAY *(Checks should be drawn on a French bank)*
- [ ] Please charge my Credit Card*

- [ ] Visa  [ ] Master Card  [ ] Access  [ ] Eurocard  [ ] American Express  [ ] Diner’s Club

Card No [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]

Exp. date [ ] [ ] [ ]

Signature:

*IMPORTANT: Please state below only the name and address under which the card is registered.*

Name:

Address: ____________________________________________

Telephone: _______________________________________

1353
Let \( f(z) \)'s animated screens show you what a textbook cannot.

The Complete Complex Variables Graphing Package

Lascaux Graphics
3220 Steuben Ave.
Bronx, NY 10467
(212) 654-7429

For IBM PC's and compatibles.

FOURTEEN PAPERS
TRANSLATED FROM THE RUSSIAN
L. A. Aksent'ev et al.
(American Mathematical Society Translations, Series 2, Volume 136)

The papers in this collection range over a variety of topics, including integral representations, complex analysis, differential equations, and functional analysis.

1980 Mathematics Subject Classification:
30, 31, 32, 34, 39, 42, 44, 46, 47
ISBN 0-8218-3112-7, LC 87-12578
Published 1987
Individual member $28, List price $47.

Shipping/Handling: 1st book $2, each add'l $1, $25 max. By air, 1st book $5, each add'l $3, $100 max. Prepayment required. Order from AMS, P.O. Box 1571, Annex Station, Providence, RI 02901-9930, or call 800-556-7774 to use VISA or MasterCard.

Equations Made Easy

Expressionist™

Expressionist™ is a Macintosh® equation editor that generates MacDraw®-quality PICTs of mathematical expressions incorporated into any WP or DP program.

Not copy-protected: $79.95


Jean-Louis Gassée, Apple Computer, Inc.

allan bonadio associates
1579 Dolores St. #4 • San Francisco, CA 94110 • (415) 262-5804
DEAN OF NATURAL SCIENCES AND MATHEMATICS
UNIVERSITY OF SOUTHERN CALIFORNIA

The University of Southern California is an urban, private research university with a student body of over 30,000. USC has in recent years experienced sharp growth both in size and in the excellence of its programs. These improvements have been especially conspicuous in the College of Letters, Arts, and Sciences. We seek a Dean of Natural Sciences and Mathematics with the vision and leadership needed to facilitate their continuance and acceleration.

The Division of Natural Sciences and Mathematics of the College has seven major core departments. It also includes interdisciplinary organizations concerned with Neurosciences, Marine and Coastal Studies, Earth Sciences, and Lasers, linked not only with the Social Sciences but also with the Schools of Medicine and Engineering. Its Dean (along with the Deans of Humanities and of Social Sciences) reports to the Dean of the College of Letters, Arts, and Sciences. The Dean of Natural Sciences and Mathematics oversees academic programs, facilitates interdisciplinary and multidisciplinary endeavors, is responsible for a budget of about $21,000,000, and hires faculty and some research staff.

QUALIFICATIONS: The Dean will be a distinguished researcher and teacher in one of the core Natural Science disciplines, and will become a tenured full professor of the appropriate department. The five-year renewable term begins either July 1 or September 1, 1988.

Send nominations (with a CV if possible) or applications (with CV and names, addresses, and telephone numbers of three to five references) to:

Dr. Joan Nay, Assistant to the Dean
College of Letters, Arts, and Sciences
University of Southern California
Los Angeles, CA 90089-4012

USC IS AN EQUAL-OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER
Deadline: January 3, 1988

---

Explore the beauty of fractals!

FractalMagic™ lets you investigate these beautiful and educational images on your IBM™, Apple II™, or Macintosh™ personal computers.

"I can't imagine a better way to waste an afternoon or two. No color PC compatible is complete without a copy of this; get one and see what I mean." Jerry Pournelle - BYTE Magazine

"Excellent program! Incredibly fascinating." BDR - Arvada, CO

Apple II - $25.00  Macintosh - $25.00
IBM CGA - $25.00  IBM EGA - $25.00

Sintar Software
P.O. Box 3746
Bellevue, WA 98009
206-455-4130
Visa, MC, AmEx ($2.00 Surcharge)
WHY SETTLE FOR THIS?...

WHEN WHAT YOU REALLY WANT IS THIS.

\[
\int_{-\infty}^{\infty} \frac{xyZ \, dt}{X - tY} = \sum_{i=1}^{n} \left( \frac{(x^4 - i)^3}{\sqrt{z^3 + y^{10}}} \right)
\]

TRY THIS:

Quality work gets a quality response—when
the work looks high-quality. What better
reason to try \texttt{PC\TeX}—the best-selling
full implementation of Prof. D. Knuth's
revolutionary \texttt{TeX} formatting/typing set
program.

\texttt{PC\TeX} offers professional typesetting
capabilities & advantages to PC users. In
a word, it gives you 'control'—control—of
format, type, symbols, quality—for complex
mathematical & engineering material,
statistical tables or straight matter. You
gain camera/publisher-ready manuscripts
to be proud of, quick & simple.

So whether you're writing the next
starshot manual, a thesis on relativity or the
great American novel, when a professional
presentation is your priority, don't settle for
less than \texttt{PC\TeX}.

From Personal \texttt{TeX}, Inc.,

starring at $249; VISA/AMERICAN express
welcome. Satisfaction guaranteed.

\texttt{PC\TeX} FORMATTING TYPESETTNG SYSTEM:

FINE TYPESET QUALITY from dot matrix, laser printers
or phototypesetters

A COMPLETE PRODUCT. Includes • our specially writ
ten \texttt{PC\TeX} Manual that lets you \texttt{TeX} immediately. • \texttt{PC\TeX}'s
macro package formats for letters, manuals, technical
documents, etc. • the \texttt{LaTeX} document preparation system \texttt{LaTeX}'s
user's manual macro package for article, book, prepa
ration • AMS-\texttt{TeX}, developed by the American Mathematical So
ciety for professional mathematical typesetting

OUTPUT DEVICE DRIVERS FOR: Epson FX 10

Apple Laserwriter • Metafont. to design-your-own type.

REQUIRES: IBM PC/XT. All or compatible. DOS 2.0 or
greater. Hard disk for printer drivers & \texttt{PC\TeX}. 

Distributed in 14 countries;
distributor inquiries welcome.

\texttt{PC\TeX} is a registered TM of Personal \texttt{TeX}, Inc.

This ad is typeset & composed using \texttt{PC\TeX}, Bitstream fonts & laser printer. Logotype & black backgrounds done photographically.
A Gourmet Guide to Typesetting with the $AMS-\TeX$ macro package

M. D. SPIVAK

The Joy of $\TeX$ is the user-friendly user's guide for $AMS-\TeX$, an extension of $\TeX$, Donald Knuth's revolutionary program for typesetting technical material. $AMS-\TeX$ was designed to simplify the input of mathematical material in particular, and to format the output according to any of various preset style specifications.

There are two primary features of the $\TeX$ system: it is a computer system for typesetting technical text, especially text containing a great deal of mathematics; and it is a system for producing beautiful text, comparable to the work of the finest printers.

Most importantly, $\TeX$'s capabilities are not available only to $\TeX$perts. While mathematicians and experienced technical typists will find that $\TeX$ allows them to specify mathematical formulas with great accuracy and still have control over the finished product, even novice technical typists will find the manual easy to use in helping them produce beautiful technical $\TeX$t.

This book is designed as a user's guide to the $AMS-\TeX$ macro package and details many features of this extremely useful text processing package. Parts 1 and 2, entitled "Starters" and "Main Courses," teach the reader how to typeset most normally encountered text and mathematics. "Sauces and Pickles," the third section, treats more exotic problems and includes a 60-page dictionary of special $\TeX$niques.

Exercises sprinkled generously through each chapter encourage the reader to sit down at a terminal and learn through experimentation. Appendixes list summaries of frequently used and more esoteric symbols as well as answers to the exercises.

PREPAYMENT REQUIRED. Order from American Mathematical Society
PO Box 1571
Annex Station
Providence, RI 02901-9930
or call 800-556-7774 to use VISA or MasterCard.

Prices subject to change.
Cumulative Index
to Mathematics of
Computation
1970-84

NOW AVAILABLE -

Author and Subject Indexes in One Volume

This index is a sequel to the Cumulative Index to Mathematics of Computation 1943-1969. It is a compilation by author and subject of all material appearing in Mathematics of Computation during the years 1970-1984 (volumes 24-43).

The author index gives full bibliographic information on all of the items, including classification numbers. The Mathematical Reviews number and reviewer name have also been provided when available. The subject index is changed from the 1943-1969 subject index and now includes title, language, and MR number (when available) as well as author name. The codes found in the previous index are retained.

ISBN 0-8218-0093-0, ISSN 0025-5718
503 pages, September 1987
List: $52, Inst. mem. $42, Indiv. mem. $31
To order, please specify MCOMIN/2 NA
Many mathematicians have expressed a desire to have a compilation of articles, books and conference proceedings that have been reviewed in Mathematical Reviews available by subject area. Together with the companion index on statistics listed below, this volume is the first such compilation.

This volume gives a listing of author names and review numbers of all the items having primary or secondary classifications in probability theory for the entire 45-year span of Mathematical Reviews from 1940 through 1984, conveniently collected in one volume. The titles are also given for items beginning in 1959. Full bibliographic information is not provided here, but can readily be obtained using the information given here by consulting either the appropriate author indexes, the issues of MR, or MathSci (for items beginning in 1959). The classification schemes used during these years are also included at the end of the index.

This convenient index should be of great value to researchers working in the area of probability, or persons who need to consult the literature in this active field.

ISBN 0-8218-0108-2, LC 86-26462
450 pages, March 1987
List $67, Inst. mem. $54, Indiv. mem. $40, Reviewer $34
To order, please specify PROBN/40/84NA

This volume is a companion to the volume of Probability Theory Subject Indexes mentioned above. It gives a listing of author names and review numbers of all the items having primary or secondary classifications in statistics for the entire 45-year span of Mathematical Reviews from 1940 through 1984, conveniently collected in one volume. The titles are also given for items beginning in 1959. Full bibliographic information is not provided here, but can readily be obtained using the information given here by consulting either the appropriate author indexes, the issues of MR, or MathSci (for items beginning in 1959). The classification schemes used during these years are also included at the end of the index.

This convenient index should be of great value to researchers working in the area of statistics, or persons who need to consult the literature in this important field.

ISBN 0-8218-0107-4, LC 86-26460
500 pages, March 1987
List $67, Inst. mem. $54, Indiv. mem. $40, Reviewer $34
To order, please specify STATIN/40/84NA

Combination offer of the two indexes above:

Probability Theory Subject Indexes from Mathematical Reviews, 1940-84
Statistics Subject Indexes from Mathematical Reviews, 1940-84
Two volume set price:
List: $115, Inst. mem. $92, Indiv. mem. $69, Reviewer $58
To order, please specify STAPI/40/84NA

PREPAYMENT REQUIRED. Add shipping and handling: $2 first book, $1 each add’l, max. $25; by air $5 first book, $3 each add’l, max. $100.

Order from:
American Mathematical Society
Annex Station
P.O. Box 1571
Providence, RI 02901-9930
Call 401-272-9500 or 800-556-7774 to use VISA or MasterCard
NOW AVAILABLE

AUTHOR AND SUBJECT INDEXES
OF MATHEMATICAL REVIEWS, 1980-84

This comprehensive 12-volume set contains both author and subject listings for all of the reviews that appeared in Mathematical Reviews during the years 1980 to 1984. Containing approximately 9,600 pages, it is an important addition to any mathematics library.

With this set of indexes at hand, readers can:

- access fully, by both author and subject area, the mathematical literature of the past five years
- discover listings for approximately 200,000 papers, books, and conference proceedings—all the items reviewed in Mathematical Reviews during these years
- obtain information about approximately 8,000 additional items that were not reviewed individually, but which are fully classified and cross-referenced in these indexes
- find complete bibliographic information for each article under any author associated with the article, and cross-references for the names of editors, translators, and other persons associated with an item
- access, via a key index, all those publications that do not have named authors or editors
- locate, under each subject index heading, all items having this classification as either a primary or a secondary classification

ISBN 0-8218-0105-08, LC 42-4221
December 1986, 9,600 pages
List $1875, Inst. mem. $1500
To order, please specify MREVIN/80/84NA

PREPAYMENT REQUIRED. Order from
American Mathematical Society, Annex Station, P.O. Box 1571, Providence, RI 02901-9930
Telephone: (401) 272-9500 or (800) 556-7774
Asymptotic analysis, which started as a mathematical tool for the treatment of special problems in Mathematical Physics affected by the presence of characteristic small or large parameters, has been developing rapidly during the last decennia, acquiring more and more global features and penetrating into different fields of Mathematics and applied sciences.

However, mathematical periodicals have been slow to respond to this development, creating a gap between the amount of work done by and in asymptotic analysis and the existence of adequate periodicals. The journal ASYMPTOTIC ANALYSIS is designed to fill this gap, offering mathematicians a concentrated source of newly-acquired information which they might need in formal analysis of asymptotic problems, and providing people working in the application of asymptotic analysis with up-to-date mathematical information.

ASYMPTOTIC ANALYSIS is primarily concerned with publishing original research papers to moderate size, and short communications on novel mathematical results in asymptotic analysis. A limited number of selected survey or expository papers will also be included. Papers will be in English and occasionally in French.
Complex Semisimple Lie Algebras
Jean-Pierre Serre

These notes, already well known in their original French edition, give the basic theory of semisimple Lie algebras over the complex numbers including the basic classification theorem. Chapters cover such areas as Cartan subalgebras, root systems, and a proof of representation theory. The last chapter discusses the connection between Lie algebras and Lie groups, and is intended to guide the reader towards further research.

1987/83 pp/6 illus/Paper $19.80
ISBN 0-387-96569-6

Differential Geometry
Manifolds. Curves and Surfaces
Marcel Berger and Bernard Gostiaux
Translated from the French by S. Levy


1987/Approx 480 pp/249 illus/Cloth $48.00 (tent.)
(Graduate Texts in Mathematics, Vol. 115)

A Course in Number Theory and Cryptography
Neal Koblitz

This book introduces the reader to arithmetic topics, both ancient and modern, which have been at the center of interest in applications of number theory, particularly in cryptography. The approach taken is algorithmic, emphasizing estimates of the efficiency of the techniques which arise from the theory. Extensive exercises are included in all the chapters.

1987/Approx 216 pp/5 illus/Cloth $34.00
(Graduate Texts in Mathematics, Vol. 114)

A Budget of Trisections
Underwood Dudley

Though it is impossible to trisect angles with straightedge and compass alone, many people have tried. This book is about angle trisections and the people who attempt them. Its purpose is to collect many trisections in one place, inform about trisectors, amuse the reader, and, most importantly, reduce the number of trisectors. It can be read and enjoyed by anyone who has taken a high school geometry course. Includes details not found in any other publication.

1987/Approx 250 pp/132 illus/Cloth $29.80
ISBN 0-387-96568-8

Sphere Packings, Lattices, and Groups
John H. Conway and Neil J.A. Sloane

This new volume in the Grundlehren series is mainly concerned with the problem of packing spheres in Euclidean space of dimensions 1,2,3,4,5,..., but also studies some closely related problems such as the kissing number problem, the covering problem, the quantizing problem, and the classification of quadratic forms. Contains many new and interesting results.

1987/Approx 712 pp/112 illus/74 tables/Cloth $87.00
(Grundlehren der mathematischen Wissenschaften, Volume 290)

Kleinian Groups
Bernard Maskit


1987/Approx 344 pp/67 illus/Cloth $77.50 (tent.)
(Grundlehren der mathematischen Wissenschaften, Volume 287)

To order, please visit your local bookstore, or write to: Springer-Verlag New York, Inc., Attn: G. Kiely, 175 Fifth Avenue, New York, NY 10010. Checks and Money Orders (plus $2.50 for shipping) are acceptable forms of payment. NY, NJ, and CA residents please add state sales tax. To order by credit card, call TOLL FREE 1-800-526-7254 (in NJ, 201-348-4033).