VOLUME 250
GEOMETRICAL METHODS IN THE THEORY OF ORDINARY DIFFERENTIAL EQUATIONS
By V.I. Arnold, Moscow University
Translated by Joseph Szucs
Differential equations, in many instances, represent the link between mathematical theory and applications to natural sciences. Geometrical Methods in the Theory of Ordinary Differential Equations explores differential equations with an emphasis on structural stability, concentrating on the many applications to various asymptotic methods. Translated from Russian, this self-contained volume explores the theory and applications of perturbation theory, averaging, Poincaré normal forms, and bifurcation theory. Problems are included.
1982. approx. 384p. 153 illus. cloth. $36.00.

Volume 251
METHODS OF BIFURCATION THEORY
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Emphasizing analytic methods and applications, Methods in Bifurcation Theory represents the first complete presentation of both static and dynamic bifurcation theory. This volume not only describes the basic elements of nonlinear functional analysis as it relates to bifurcation theory of solutions to nonlinear equations, but also discusses the applications of differential equations to bifurcation theory. Many previously unpublished results presented in a form applicable to infinite-dimensional problems are included.
1982. 515p. 97 illus. cloth. $46.00.
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Volume 252
NONLINEAR ANALYSIS MANIFOLDS
Monge-Ampère Equations
By Thierry Aubin, University "Pierre and Marie Curie," Paris, France
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Notices of the American Mathematical Society

Volume 29, Number 8, December 1982

Special Issue
Assistantships and Fellowships in the Mathematical Sciences 1983-1984

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Statement by

AMS 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.


Committee on Employment and Educational Policy

(December 1982)

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Irwin Kra
Robert W. McKelvey

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Susan J. Devlin
Lincoln K. Durst
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Robert W. McKelvey

Employment Concerns Subcommittee
Charlotte Lin
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Robert J. Thompson

Barnet M. Weinstock,
chairman

Errata to 26th Annual AMS Survey

The following corrections should be made in the report of the 26th Annual AMS Survey, which appeared in the November 1982 Notices.

On page 631: in Table 1, the total of women without doctorate reported as Instructor/Lecturer should be 446 rather than 46; the total of women without doctorate reported as Assistant Professor should be 132 rather than 32.

On page 649: in the list of Doctoral Degrees Conferred in 1981-1982, the dissertation title for John Oprea of the Mathematics Department at Ohio State University should have been Contributions to rational homotopy theory.
Assistantships and Fellowships

*In the Mathematical Sciences in 1983–1984*

The list of assistantships and fellowships at universities includes 316 departments of mathematics, applied mathematics, statistics, computer science, and related mathematical disciplines; these represent 239 colleges and universities. Institutions in the United States are listed alphabetically by state, followed by Canadian institutions.

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 who have published a technical paper or book in the last three years.

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

**Abbreviations used**

- ANT ... Algebra or Number Theory
- AFA ... Analysis or Functional Analysis
- GT ... 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.

---

### Graduate Study at Universities

<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND paid to student</th>
<th>FEES paid by student ($)</th>
<th>SERVICE REQUIRED hours per week of service</th>
<th>DEGREES AWARDED Academic year</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Alabama State University, Montgomery 36195</em></td>
<td><em>Faculty 12; Published 3</em></td>
<td>Bachelor's by inst. 450</td>
<td>Bachelor's by dept. 13</td>
<td>Master's by dept. 1</td>
</tr>
<tr>
<td><em>Faculty 12; Published 3</em></td>
<td>2359.98 9 237 12</td>
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</tr>
<tr>
<td>Teaching Assistantship (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| *Auburn University, Auburn University 36849* | *Applications due: 3/10/83 Faculty 47; Published 37* | Bachelor's by inst. 3303  | Bachelor's by dept. 22  | Master's by dept. 7  |
|Ben Fitzpatrick, Jr., Head |  |  |  |  |
| Teaching Assistantship (30) | *9 990 5-10F Teaching* |  |  |  |
| *Stipend to be announced.* |  |  |  |  |

| *University of Alabama in Birmingham 35294* | *Applications due: 4/30/83 Faculty 12; Published 3* | Bachelor's by inst. 411  | Bachelor's by dept. 1  | Master's by dept. 1  |
|Alfred A. Bartolucci, Chairman |  |  |  |  |
| Fellowship (2) | 5500 12 1056 |  |  |  |
|  |  |  |  |  |

<p>| <em>University of Alabama, Huntsville 35899</em> | <em>Applications due: Open Faculty 7; Published 6</em> | Bachelor's by inst. 529  | Bachelor's by dept. 22  | Master's by dept. 22  |
|S. G. Shiva, Chairman |  |  |  |  |
| Teaching Assistantship (3) | 5000–5500 9 Waived 20 |  |  |  |</p>
<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
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</thead>
<tbody>
<tr>
<td><strong>(number anticipated 1983–1984)</strong></td>
<td>paid to student</td>
<td>paid by student ($)</td>
<td>hours type of service</td>
<td>Academic year 1981–1982</td>
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<td>DEPARTMENT OF MATHEMATICS</td>
<td>5000–5500</td>
<td>9**</td>
<td>4c Grading or Teaching</td>
<td>Bachelor's by inst. 529</td>
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<tr>
<td>F. Lee Cook, Chairman</td>
<td></td>
<td></td>
<td></td>
<td>Bachelor's by dept. 11</td>
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<tr>
<td>Teaching Assistantship (6)</td>
<td></td>
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<td>Master's by dept. 3</td>
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<tr>
<td>Graduate Co-Op Program***</td>
<td></td>
<td></td>
<td></td>
<td>*Late applications considered if positions are still available.</td>
</tr>
<tr>
<td><strong>ARIZONA</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>NORMALLY, SUMMER ASSISTANTSHIPS ARE ALSO AVAILABLE.</strong></td>
</tr>
<tr>
<td>Northern Arizona University, Flagstaff 86011</td>
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<td><strong>SEVERAL POSITIONS AVAILABLE.</strong></td>
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<td>DEPARTMENT OF MATHEMATICS</td>
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<td>Bachelor's by inst. 1684</td>
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<tr>
<td>Michael Ratliff, Chairman</td>
<td></td>
<td></td>
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<td>Bachelor's by dept. 10</td>
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<tr>
<td>Teaching Assistantship (5)</td>
<td>3590–3945</td>
<td>9</td>
<td>1375 14</td>
<td>Master's by dept. 3</td>
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<tr>
<td><strong>University of Arizona, Tucson 85721</strong></td>
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<td>Bachelor's by inst. 2800</td>
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<tr>
<td>DEPARTMENT OF COMPUTER SCIENCE</td>
<td>4723–5200</td>
<td>9 216–325</td>
<td>20</td>
<td>Master's by dept. 13</td>
</tr>
<tr>
<td>David R. Hanson, Chairman</td>
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<td></td>
<td></td>
<td>Ph.D. (79/82) CS 2. Total: 2</td>
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<td>4723–6026</td>
<td>9–12 216–325</td>
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<td>Master's by dept. 7</td>
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<tr>
<td>T. Laetsch, Chairman</td>
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<td>Ph.D. (79/82) ANT 2, AFA 2, AM 7. Total: 11</td>
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<td>5900</td>
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<td>710</td>
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<td>Teaching Assistantship (38)</td>
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<td>9</td>
<td>710 6c</td>
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<td><strong>ARKANSAS</strong></td>
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<td>Arkansas State University, State University 72467</td>
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<td>Master's by dept. 10</td>
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<tr>
<td>DEPARTMENT OF COMPUTER SCIENCE, MATHEMATICS AND PHYSICS</td>
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<td></td>
<td></td>
<td>Ph.D. (79/82) ANT 1, AFA 1, GT 2, AM 1. Total: 5</td>
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<tr>
<td>J. L. Linnstaedter, Chairman</td>
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<td>Bachelor's by inst. 1681</td>
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<td>3960</td>
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<td><strong>University of Arkansas, Fayetteville 72701</strong></td>
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<td>Bachelor's by inst. 1681</td>
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<tr>
<td>Bernard L. Madison, Chairman</td>
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<td>Bachelor's by dept. 35</td>
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<td>60 6c</td>
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<td><strong>CALIFORNIA</strong></td>
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<td>Ph.D. (79/82) ANT 3, AFA 2, GT 1, L 1, S 1, Other 3. Total: 11</td>
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<tr>
<td>California Institute of Technology, Pasadena 91125</td>
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<td>APPLIED MATHEMATICS</td>
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<td>9</td>
<td>12 Grading</td>
<td>Bachelor's by inst. 167</td>
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<tr>
<td>H. B. Keller, Executive Officer</td>
<td>4000–6500</td>
<td>9</td>
<td>12 Research</td>
<td>Bachelor's by dept. 18</td>
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<td>5000–8000</td>
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<td>Research Assistantship (4)</td>
<td>1000–2000</td>
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<td>Miscellaneous (2)</td>
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<td>Bachelor's by dept. 16</td>
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<td><strong>MATHEMATICS</strong></td>
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<td>Bachelor's by dept. 1</td>
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<tr>
<td>W. A. J. Luxemburg, Executive Officer</td>
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<td></td>
<td>Ph.D. (79/82) ANT 3, AFA 2, GT 1, L 1, S 1, Other 3. Total: 11</td>
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<td>Fellowship (4)</td>
<td>5350–6687</td>
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<td>Bachelor's by inst. 2742</td>
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<td>Teaching Assistantship (18)</td>
<td>5794–6628</td>
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<td>4c Teaching</td>
<td>Bachelor's by dept. 16</td>
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<tr>
<td><strong>California Polytechnic State University, San Luis Obispo 93407</strong></td>
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<td>Bachelor's by dept. 1</td>
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<tr>
<td>DEPARTMENT OF MATHEMATICS</td>
<td>2475</td>
<td>9</td>
<td>10c Tutoring</td>
<td>Master's by dept. 1</td>
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<tr>
<td>C. J. Hanks, Head</td>
<td>2942</td>
<td>9</td>
<td>3c Teaching</td>
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<td>Part-time Instructorship</td>
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<td>Master's by dept. 1</td>
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<tr>
<td>*Registration fees $120. Nonresident: $70 per quarter unit.</td>
<td></td>
<td></td>
<td></td>
<td>Master's by dept. 1</td>
</tr>
</tbody>
</table>
The Department of Mathematics invites applications from outstanding students for a $5900 graduate fellowship and for teaching assistantships. The Department of Mathematics has graduate programs in mathematics leading to Master of Arts, Master of Science, and Doctor of Philosophy degrees. Various areas of mathematics are represented; areas in which there is particularly strong faculty interest are algebra, number theory, and applied mathematics. The University, which has approximately 30,000 students currently enrolled, offers diversified educational and cultural activities.

For further information write to:

Graduate Committee, Department of Mathematics
Building 89, University of Arizona, Tucson, Arizona 85721

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Robert Osserman, Chairman

**Applications due: 1/15/83**

**Bachelor's by inst. 1675**

**Bachelor's by dept. 35**

**Master's by dept. 8**

Graduate Assistantship (40) * 4600–5600 9

*Graduate Assistantships are available for one quarter as Teaching Fellows, for one quarter as Course Assistants, and for one quarter as Research Assistants, for a total of three quarters.

**Ph.D. (79/82) ANT 3, AFA 8, GT 7, L 1, CS 1, OR 2, AM 3, Other 3. Total: 28**

**DEPARTMENT OF STATISTICS**

David Siegmund, Chairman

**Fellowship (10)* 5000 9**

*All awards are a combination of fellowship, teaching assistantship, and research assistantship.

**Ph.D. (79/82) S. 24. Total: 24**

**University of California, Berkeley 94720**

**DEPARTMENT OF MATHEMATICS**

Morris W. Hirsch, Chairman

**Applications due:* 2/1/83**

**Bachelor's by inst. 2545**

**Bachelor's by dept. 27**

**Master's by dept. 3**

Fellowship (30) 500–7345.50 9

Teaching Assistantship (145) 7299–7482 9

Research Assistantships (35) 5661–5976 9

*New students: 12/1/82. Continuing students: fellowships 12/1/82; assistantships 2/1/83.

**University of California, Davis 95616**

**DEPARTMENT OF MATHEMATICS**

Carlos R. Borges, Chair

**Applications due: 1/15/83**

**Bachelor's by inst. 628**

**Bachelor's by dept. 12**

**Master's by dept. 9**

Teaching Assistantship (22) 7200 9

*New students: 12/1/82. Continuing students: fellowships 12/1/82; assistantships 2/1/83.

**University of California, Irvine 92717**

**DEPARTMENT OF MATHEMATICS**

James J. Yeh, Chairman

**Applications due: 2/1/83**

**Bachelor's by inst. 23**

**Bachelor's by dept. 9**

**Ph.D. (79/82) ANT 1, AFA 2, L 1, P 3, S 1. Total: 8**

---

**UNIVERSITY OF CALIFORNIA, LOS ANGELES**

Programs. 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 in applied mathematics.

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For additional information write to: Graduate Advisor, Department of Mathematics, University of California, Los Angeles, CA 90024.
University of California, Los Angeles 90024

DEPARTMENT OF BIOMATHEMATICS
Carol Newton, Chairman

Applications due: 12/30/82*
Faculty 9; Published 9

Fellowship (3-4)  3200—8500  9  **
Teaching Assistantship (1-2)  3500—7000  9
Research Assistantship (1)  6000—8500  12
Nonresident Tuition Waiver (1-2)  9

*Preferred date.
**Tuition covered for 1-2

DEPARTMENT OF MATHEMATICS
Robert J. Blattner, Chairman

Applications due: 2/15/83
Faculty 72; Published 59

Fellowship (6-8)  7500  9  Waived
Teaching Fellowship (6-8)  7500—8559  9  Waived  2c  Teaching
Teaching Assistantship (64)  7299—8559  9  1226  4c  Teaching
Research Assistantship (5-7)  7548—8694  9-12  1226  Research
Community Teaching Fellowship (3)  7299  9  1226—4380  5c  Teaching

University of California at San Diego, La Jolla 92093

DEPARTMENT OF MATHEMATICS
Hubert Halkin, Chairman

Applications due: 1/15/83
Faculty 44; Published 40

Fellowship (2)  6000—8500  12
Teaching Assistantship (44)  7299  9  *  3 or 4  Teaching
Research Assistantship (1)  6290  10  *
Scholarship (13)  Fees and/or  Tuition  **

*In 1982—83 all graduate students (resident and nonresident) pay per quarter $411.50.
Nonresident graduate students pay per quarter $1,050 tuition in addition to the above.
**The 13 Tuition and/or Fee Scholarships are given in addition to the Fellowships,
Teaching Assistantships and Research Assistantships mentioned above.

UNIVERSITY OF CALIFORNIA, RIVERSIDE

The department has masters and Ph.D. programs in mathematics and a masters program in computer science. Areas of specialization include: Applied Mathematics, Differential Equations, Functional Analysis, Approximation Theory, Commutative Algebra, General Topology, Algebraic Semi-lattices and semi-groups, Probability and Statistics. UCR has a total of less than 4500 students, including approximately 1300 graduate students. The Department of Mathematics has a faculty of 19 and about 35 graduate students; a ratio which enables faculty members to work closely with each student. Excellent computing facilities are being regularly expanded and updated. Write to:

Graduate Advisor — Department of Mathematics
University of California, Riverside, CA 92521

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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. (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: Regents Fellowships ($575 per month + Tuition and/or Fees for 9 months). Research Assistantships (approximately $629 per month). Teaching Assistantships (approximately $811 per month for 9 months). San Diego Fellowship (for educationally disadvantaged students; approximately $575 per month + Fees for 9 months).

Department of Mathematics - UNIVERSITY OF CALIFORNIA, SAN DIEGO
La Jolla, California 92093
TYPE OF ASSISTANCE | STIPEND | FEES | SERVICE REQUIRED | DEGREES AWARDED
--- | --- | --- | --- | ---
(numer anticipated | paid to student | paid by student ($) | hours per week of service | Academic year

University of California, Santa Barbara 93106
DEPARTMENT OF MATHEMATICS
James B. Robertson, Chairperson

Fellowship (4) 1000–3000 9 4200*
Teaching Assistantship (50) 2000–7300 9 4375.50* 20
Research Assistantship (4) 2000–7300 9 4375.50* 20

University of California, Santa Cruz 95064
DEPARTMENT OF MATHEMATICS
Gerhard Ringel, Chairman

Fellowship (1) 4200 9
Teaching Assistantship (23) 9 * 20
California Teaching Fellowship (2) 9 1327 20
*In-state: $1327; out-of-state: $3150.

University of Southern California, Los Angeles 90089
DEPARTMENT OF COMPUTER SCIENCE
F. Roy Carlson, Jr., Chairman

Teaching Assistantship (15) 6000–8000 9 3000/sem. 20 Teaching
Research Assistantship (10) 6000–8000 9 3000/sem. 20 Research

COLORADO

Colorado School of Mines, Golden 80401
DEPARTMENT OF MATHEMATICS
Ardel J. Boes, Head

Teaching Assistantship (5) 4950–5400 9 12
Research Assistantship (2) 4950–5400 9

*In-state: $36 per credit hour, $33 fees per semester.

University of Colorado, Boulder 80309
DEPARTMENT OF MATHEMATICS
John H. Hodges, Chair

Fellowship (1) 3500 9 240 fees
Supplementary Teaching Fellowship (12) 6500–7700 9 240 fees 20 Teaching, grading
Teaching Assistantship (29) 5500–6700 9 240 fees 20 Teaching, grading
*Late applications will be considered.

University of Colorado at Denver 80202
DEPARTMENT OF MATHEMATICS
Z. R. Hartvigson, Chairman

Teaching Assistantship (12) 3010–6020 9 * 6 Teaching
*$36 per credit hour, $33 fees per semester.

University of Northern Colorado, Greeley 80639
DEPARTMENT OF MATHEMATICS AND APPLIED STATISTICS
William Bosch, Chairman

Teaching Assistantship (5) 4550–5040 9 * 6 Teaching
*Resident: $415, nonresident: $745.
CONNECTICUT

Central Connecticut State College, New Britain 06050
DIVISION OF MATHEMATICS
R. M. Kennedy, Chairman, Mathematics and Statistics
G. B. Miller, Chairman, Applied Mathematics and
Computer Science
Teaching Assistantship (1 1/2) 1440/sem. 9 * 6c
*Resident: $206 per semester.

University of Connecticut, Storrs 06268
DEPARTMENT OF MATHEMATICS
E. Spiegel, Chairman
Teaching Fellowship (3) 5195-6460* 9 617 7
Teaching Assistantship (22) 5195-6460* 9 617 14
Research Assistantship (2)
*An 8% increase is expected for 1983-84.

University of Hartford, West Hartford 06117
DEPARTMENT OF MATHEMATICS
Applications due: 3/15/83
Faculty 9; Published 8
Fellowship (5) 3000-3500 9 617 7
Teaching Fellowship (5) 3000-3500 9 617 14
Teaching Assistantship (12) 2100-2800 9 617 14
Summer Fellowship (2) 750 3

Wesleyan University, Middletown 06457
DEPARTMENT OF MATHEMATICS
Ethan M. Coven, Chairman
Teaching Assistantship (12) 4900-5100 9 Waived 10 Teaching or equivalent
Summer Support (10) 1350-1550 3

Yale University, New Haven 06520
DEPARTMENT OF MATHEMATICS
R. H. Szczarba, Chairman
Fellowship (10) 2700-5300* 9 100/ Grading, acad. yr. tutoring

DISTRICT OF COLUMBIA

George Washington University, Washington 20052
DEPARTMENT OF MATHEMATICS
T. P. G. Liverman, Chairman
Fellowship (6)* 1000-1200 9 6c
Teaching Assistantship (6)* 2650-2900 9
*Fellowship and Teaching Assistantship awarded to the same individual.
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<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
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<td>M. J. DeLeon, Chairman</td>
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<td>Florida Atlantic University, Boca Raton 33431</td>
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<td>Florida International University, Miami 33199</td>
<td>Bachelor's by inst. 3328</td>
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<td>Toby S. Berk, Chairperson</td>
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<td>Minority Fellowship (3)</td>
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<td>**In-state: $33 per hour; out-of-state: $72 per hour unless waived.</td>
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</table>

**THE FLORIDA STATE UNIVERSITY**

**DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE**

The Department offers well-established Ph.D. and masters degree programs with specializations in algebra, analysis, applied mathematics, computer science, differential equations and topology (for the Ph.D.). The masters program(s) offer specializations in pure mathematics, applied mathematics, and computer science. The masters program in mathematical sciences is offered for those students planning careers in the industrial sector. Financial support is available as follows: Teaching Assistantships: $5,400–$6,000 for 9 months; University Fellowships: $6,000 for 12 months; Research Assistantships: $5,400–$6,000 for 9 months; Native Ethnic University Fellowships: $5,900 for 12 months.

For additional information, please write to:

Admissions Committee
Department of Mathematics and Computer Science
Florida State University
Tallahassee, FL 32306
<table>
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<th>DEPARTMENT OF STATISTICS</th>
<th>Applications due: 2/15/83</th>
<th>Bachelor's by inst. 3328</th>
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<td>Frederick Leysieffer, Chairman</td>
<td>Faculty 16; Published 16</td>
<td>Bachelor's by dept. 9</td>
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<td>Fellowship (2)</td>
<td>6000 12 1443</td>
<td>Master's by dept. 12</td>
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<td>6500 12 1443 13 Grading, teaching</td>
<td>Ph.D. (79/82) P 3, S 15, OR 3.</td>
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<td>Research Assistantship (7)</td>
<td>6500 12 1443 13 Research</td>
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University of Central Florida, Orlando 32816
DEPARTMENT OF MATHEMATICS AND STATISTICS
Joby Milo Anthony, Chairman

| Teaching Assistantship (3) | 5000 9 38/sem. hr. | |

University of Florida, Gainesville 32611
DEPARTMENT OF MATHEMATICS
A. R. Bednarek, Chairman

| Fellowship (3) | 7000–8000 9 | * |
| Teaching Assistantship (45) | 6000–8000 9 | * 4-6C Teaching |
| *$33 per credit hour except research hours. |

DEPARTMENT OF STATISTICS
Richard L. Scheaffer, Chairman

| Fellowship (1) | 4875 12 38/cr. hr. | |
| Teaching Assistantship (15) | 4500–6750 9 38/cr. hr. 13-20 Grading, teaching |
| Research Assistantship (15) | 4500–6750 9 38/cr. hr. 13-20 Research |

University of Miami, Coral Gables 33124
DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE
Shair Ahmad, Chairman

| Fellowship (2) | 4000 8 Waived Research |
| Teaching Assistantship (25) | 5800–6100 9 Waived 6C Teaching |

University of South Florida, Tampa 33620
DEPARTMENT OF MATHEMATICS
M. N. Manougian, Chairman

| Fellowship (2) | 5000–5500 9 | |
| Teaching Assistantship (30) | 5655–6513 9 | * 8C |
| Center for Mathematical Services (2) | 5655–6513 9 | * 20 |
| *Tuition Waivers are available to qualified students. |

---

**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:

PROFESSOR DONALD W. HEARN, GRADUATE COORDINATOR
DEPARTMENT OF INDUSTRIAL AND SYSTEMS ENGINEERING
UNIVERSITY OF FLORIDA, GAINESVILLE, FL 32611

731
UNIVERSITY OF SOUTH FLORIDA
Tampa, Florida

GRADUATE STUDIES IN MATHEMATICS LEADING TO M.A. AND PH.D. DEGREES
Our 30 full time faculty members represent most areas of pure and applied mathematics and statistics. Special M.A. programs are offered in Statistics and Computing, Applied Mathematics, and Computer Science. Ph.D. programs are available in these areas also, as well as in Differential Equations, Probability, Statistics, Analysis, Approximation Theory, and other areas. Interdisciplinary programs with the College of Engineering and the College of Medicine are available.

The special facilities of the department include a computer laboratory and a Center for Mathematical Services 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 about 25,000 students and three branch campuses. The main campus is located north of the City of Tampa. The area is a resort area boasting of a warm climate all year.

Financial aid is available to qualified students in the form of Fellowships and Teaching Assistantships. In addition to the stipends quoted above, tuition waivers are available to qualified students. For further information, write to:

Dr. M. N. Manougian, Chairman — Department of Mathematics
University of South Florida — Tampa, Florida 33620

GEORGIA

Emory University, Atlanta 30322
DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE
David Ford, Chairman
Applications due: 2/15/83
Fellowship (1) 7500 9 Waived 3c
Teaching Assistantship (7) 3900—6000 9 Waived
Ph.D. (79/82) ANT 2, AFA 1, Other 3. Total: 6

University of Georgia, Athens 30602
DEPARTMENT OF MATHEMATICS
James C. Cantrell, Head
Applications due: 2/15/83
Teaching Assistantship (19) 4890—6950 9 12 Teaching
Non-teaching Assistantship (6) 4890—6950 9 12 Grading
Ph.D. (79/82) AFA 1, GT 1, AM 1. Total: 3

DEPARTMENT OF MATHEMATICS EDUCATION
James W. Wilson, Head
Applications due: 2/15/83
Teaching Assistantship* 4890—6950 9 1050 13-18 Teaching
Research Assistantship* 4890—6950 9 1050 13-18 Research
Ph.D. (79/82) ME 9. Total: 9

*Number anticipated not available.

DEPARTMENT OF STATISTICS AND COMPUTER SCIENCE
Lynne Billard, Head
Applications due: 2/15/83
Teaching Assistantship (20) 4890—5213 9 * 13
Ph.D. (79/82) S 8. Total: 8

*As of Fall 1982, 12 or more quarter hours: resident $318; nonresident $811.

HAWAII

University of Hawaii at Manoa, Honolulu 96822
PUBLIC HEALTH SCIENCES
DEPARTMENT OF BIOSTATISTICS
C. S. Chung, Chair
Applications due: 4/1/83
Teaching Assistantship (1) 5400 9 15-20
Ph.D. (79/82) S 2. Total: 2

DEPARTMENT OF MATHEMATICS
Tom S. Pitcher, Chairman
Applications due: 3/1/83
Teaching Assistantship (11) 5016—5604 9 40 3c Teaching
Ph.D. (79/82) ANT 1, GT 1, L 1. Total: 3
TYPE OF ASSISTANCE | STIPEND | FEES | SERVICE REQUIRED | DEGREES AWARDED
--- | --- | --- | --- | ---
| (number anticipated 1983–1984) | paid to student | paid by student ($) | hours per week type of service | Academic year 1981–1982

**IDAHO**

University of Idaho, Moscow 83843
DEPARTMENT OF MATHEMATICS AND APPLIED STATISTICS
James Calvert, Chairman

Teaching Assistantship (13) 5800–6200 9 840 6 Teaching

Applications due: 3/15/83
Bachelor's by inst. 1100
Faculty 22; Published 7
Bachelor's by dept. 9
Master's by dept. 3
Ph.D. (79/82) GT 1, CS 1.
Total: 2

**ILLINOIS**

Eastern Illinois University, Charleston 61920
DEPARTMENT OF MATHEMATICS
Alphonso J. DiPietro, Chairman

Teaching Assistantship (12) 3960 9 5 Teaching
Graduate Assistantship (2) 2970 9

Applications due: 3/1/83
Bachelor's by inst. 2200
Faculty 31; Published 8
Bachelor's by dept. 40
Master's by dept. 10

Illinois State University, Normal 61761
DEPARTMENT OF MATHEMATICS
Albert D. Otto, Chairperson

Teaching Assistantship (10-12) 2925–3375 9 Waived 4 Teaching
Instructorship (3) 7200–9000 9 ** 6-8 Teaching
Doctoral Assistantship (3-5) 3870–5000 9 Waived 4 Teaching

Applications due: 4/1/83*
Bachelor's by inst. 3367
Faculty 39; Published 22
Bachelor's by dept. 40
Master's by dept. 5
Ph.D. (79/82) ANT 1, AFA 1, ME 1. Total: 3

**Late applications can be considered.
**Waived for 4 hours.

Northeastern Illinois University, Chicago 60625
DEPARTMENT OF MATHEMATICS
Barry H. Dayton, Chairperson

Teaching Assistantship (2) 2900 10 14 Tutoring
Faculty Assistantship (1) 8000 10 32 Tutoring

Applications due: 7/1/83
Bachelor's by inst. 1694
Faculty 14; Published 4
Bachelor's by dept. 9
Master's by dept. 6

Northern Illinois University, DeKalb 60115
DEPARTMENT OF MATHEMATICAL SCIENCES
Donald B. McAlister, Chairman

Teaching Assistantship (31) 4500–4950 9 Teaching

Applications due: 7/1/83
Bachelor's by inst. 3276
Faculty 53; Published 42
Bachelor's by dept. 34
Master's by dept. 14

**Ph.D. Program at Hawaii**

The University of Hawaii Mathematics Department has an excellent young faculty of 40 members. The Ph.D. program is relatively new, and the small number of graduate students makes for an extremely favorable student-faculty ratio. Very little time is spent here in shoveling snow, etc. Teaching Assistantships are available starting at $5364. For details write

H. S. Bear, Graduate Chairman
Department of Mathematics
University of Hawaii at Manoa
Honolulu, HI 96822

AN EQUAL OPPORTUNITY EMPLOYER

733
Northwestern University, Evanston 60201
DEPARTMENT OF ENGINEERING SCIENCES
AND APPLIED MATHEMATICS
Applications due: 2/15/83
W. E. Olmstead, Director of Graduate Study
Faculty 10; Published 10
Fellowship (10) 5500–6800 9 Waived
Teaching Assistantship (5) 5500–6300 9 Waived 15 Teaching
Research Assistantship (5) 7200–8500 12 Waived 15 Research
Ph.D. (79/82) AM 10. Total: 10

DEPARTMENT OF INDUSTRIAL ENGINEERING
AND MANAGEMENT SCIENCE
Applications due: 3/83
A. Hurter, Chairman
Faculty 15; Published 15
Fellowship (6) 18 Grading, quiz section
Teaching Assistantship (10) 18 Research
Ph.D. (79/82) OR 1. Total: 1

DEPARTMENT OF MATHEMATICS
Applications due: 1/15/83
Donald G. Saari, Chairman
Faculty 38; Published 38
Fellowship (8-12) 5700–6300 9 Waived 2-3 Teaching, research, grading
Teaching Assistantship (30-35) 5700–6300 9 Waived 2-3 Teaching, research, grading
Ph.D. (79/82) ANT 3, AFA 2, GT 3, P 1. Total: 9

Southern Illinois University—Carbondale 62901
DEPARTMENT OF MATHEMATICS
Applications due: *
Ronald B. Kirk, Acting Departmental Executive Officer
Faculty 50; Published 35
Fellowship (2) 4600–4928 11 **
Teaching Assistantship (14) 4518–4932 9 ** 6c Teaching
Teaching Assistantship (6) 5522–6028 11 ** 6c Teaching
Ph.D. (79/82) AFA 1, AM 1,
**$216–$321 in fees.
Total: 2

Southern Illinois University, Edwardsville 62026
DEPARTMENT OF MATHEMATICS, STATISTICS
AND COMPUTER SCIENCES
Applications due: *
R. N. Pendergrass, Chairman
Faculty 20; Published 5
Fellowship (5) 3600 9 96
Teaching Assistantship (18) 3825–4275 9 96 20
Ph.D. (79/82) ANT 12, AFA 7,
GT 8, L 3, S 1. Total: 31

University of Chicago, Chicago 60637
DEPARTMENT OF MATHEMATICS
Applications due: 1/15/83
Felix E. Browder, Chairman
Faculty 49; Published 49
Fellowship (15) 6000 9
Ph.D. (79/82) ANT 12, AFA 7,
GT 8, L 3, S 1. Total: 31

Department of Mathematical Sciences
NORTHERN ILLINOIS UNIVERSITY

The Department of Mathematical Sciences offers the Master of Science degree in pure and applied mathematics, operations research, applied probability and statistics and mathematics education. Each student's program is tailored to his or her background and career objectives. Financial assistance in the form of Graduate Teaching Assistantships is available. Send inquiries to:

Professor Peter Nicholls, Director of Graduate Studies
Department of Mathematical Sciences
Northern Illinois University
DeKalb, IL 60115

Equal Opportunity/Affirmative Action Employer
### Type of Assistance

<table>
<thead>
<tr>
<th>Type of Assistance</th>
<th>Stipend</th>
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<td><strong>University of Illinois at Chicago 60680</strong></td>
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<td><strong>University of Illinois, Urbana 61801</strong></td>
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<td><strong>Western Illinois University, Macomb 61455</strong></td>
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<td><strong>Ball State University, Muncie 47306</strong></td>
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<td>DEPARTMENT OF MATHEMATICAL SCIENCES</td>
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**COMPUTER SCIENCE AT WESTERN ILLINOIS UNIVERSITY**

Western Illinois University offers a graduate program in computer science leading to the M.S. degree. Areas of emphasis in this program include graphics, computer communications networks, data bases, architecture, and small-scale computer systems. Additional coursework is available in operating systems, programming languages, artificial intelligence, theory of computation, and other areas.

Computer facilities include an IBM 370/155, a CDC Cyber 170/730, a Data General Eclipse, and a PDP-11. In addition, the Department maintains a microcomputer lab with several Apple, IBM, TRS-80, PET, IMSAI, and INTECOLOR systems with disks, printers, plotter, and color graphics capabilities.

Financial aid is available in the form of tuition-free graduate assistantships or instructor positions. For detailed information and application forms write to:

**DR. D. D. HEARN**
Coordinator, Computer Science Programs
Western Illinois University
Macomb, IL 61455

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735
**Indiana State University, Terre Haute 47809**

DEPARTMENT OF MATHEMATICS AND

COMPUTER SCIENCE

Charles Cheney, Interim Chairman

Graduate Assistantship (4-5)  2800–3300 9 16 cr. hr.  20

**Indiana University, Bloomington 47405**

DEPARTMENT OF MATHEMATICS

Joseph Stampfli, Chairman

Fellowship (4)  5500–6500 9 15-20 Teaching, grading
Teaching Assistantship (110)  5000–6200* 9 15-20 Teaching, grading
Research Assistantship (1)  5000–5500 9 15-20 Research
Summer Teaching
  Assistantship (44)  800–1300 2 *** 15-20 Teaching, assisting

*Accompanied by a full fee remission which exempts the student from paying all fees except approximately $109 per semester for general expenses (Health fee, etc.).

**The typical stipend for new graduate students will be at least $5,400.

***Accompanied by a full fee remission which exempts the student from paying approximately $50 for general expenses (Health fee, etc.)

** **

**Indiana University—Purdue University at Indianapolis 46205**

DEPARTMENT OF MATHEMATICAL SCIENCES

Neal J. Rothman, Chairman

Teaching Assistantship (4)  4000–6000 9 230 20 Teaching
Research Assistantship (4)  4000–6000 9 230 20 Research

Purdue University, West Lafayette 47907

DEPARTMENT OF COMPUTER SCIENCES*

Peter J. Denning, Head

Fellowship**  6000 12 ***
Teaching Assistantship**  5800–6200 10 *** 20 Grading, teaching
Research Assistantship**  7200–9600 12 *** 20 Research
Minority Fellowship**  4800 12

*Employment may be outside the department.

**Number not known at this time.

***$120 per semester; $60 per summer.

DEPARTMENT OF INDUSTRIAL ENGINEERING

F. F. Leimkuhler, Head

Fellowship (1)  6000–9000 12 120
Teaching Assistantship (10)  4770–5370 9 120 20 Grading and teaching
Research Assistantship (15)  6000–9000 12 120 20 Research

DEPARTMENT OF MATHEMATICS

M. S. Baouendi, Chairman

Fellowship (4)  500/mo. 12 240
Teaching Assistantship (130)  5100–6200 9 240
Research Assistantship (2)  12 240
Black Fellowship (2)  400/mo. 12 240

*Fellowships: 2/1/83; assistantships: 3/15/83.

**Graders: 20 hours per week; those with classroom assignments: 4 contact hours per week, 16 hours per week in preparation and grading.

***Plus allowances.

DEPARTMENT OF STATISTICS

Shanti S. Gupta, Head

Fellowship (3)  6000 12 250
Teaching Assistantship (30)  5200–5700 10 250 6 Teaching
Research Assistantship (8)  5000–5700 10 250 20 Research

*Fellowships: 2/1/83; assistantships: 5/1/83.
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<td>University of Northern Iowa, Cedar Falls 50614 DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE</td>
<td>Applications due: 3/1/83 Faculty 20; Published 9</td>
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<td>David Duncan, Head</td>
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<td>Kansas State University, Manhattan 66506 DEPARTMENT OF MATHEMATICS</td>
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<td>R. Richard Summerhill, Head</td>
<td>Teaching Assistantship (22) 6300 9</td>
<td>210/sem. 4-6</td>
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<td>DEPARTMENT OF STATISTICS AND STATISTICAL LABORATORY</td>
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<td>Arthur D. Dayton, Head and Director</td>
<td>Teaching Assistantship (10) 4860-5670 9</td>
<td>850 16 Teaching, grading</td>
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<td>Research Assistantship (5) 6600-8400 12</td>
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<td>Scholarship (1) 500</td>
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<td></td>
<td>Part-time instructorship (3-5) 5400-11070 9</td>
<td>1000 16/40 Teaching, grading</td>
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**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, and finite geometry. We also have faculty actively pursuing such other research areas as categorical topology, differential geometry, group theory, lattice theory, and number theory.

We offer teaching assistantships that pay at least $700 per month and also have a substantial endowment for scholarships and fellowships.

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
Kansas State University
Manhattan, KS 66506


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<th>TYPE OF ASSISTANCE</th>
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Pittsburg State University, Pittsburg 66762
DEPARTMENT OF MATHEMATICS
Helen Kriegsman, Chairman

Teaching Assistantship (4) 3600
*Plus $95 campus privilege fee.

University of Kansas, Lawrence 66045
DEPARTMENT OF MATHEMATICS
Charles J. Himmelberg, Chairman

Fellowship (1) 5000 9
Teaching Assistantship (45) 6000–7000 9 25.20/sem. 20
Scholarship (9)** Tuition & Fees 9
*Fellowships: 2/15/83; Assistantships 3/1/83 for first consideration.
**All graduate students are eligible for these, including teaching assistants.

Wichita State University, Wichita 67208
DEPARTMENT OF MATHEMATICS
Dharam V. Chopra, Chairman

Teaching Assistantship (8-9) 5200 9 26/hr. Teaching

University of Kentucky, Lexington 40506
DEPARTMENT OF MATHEMATICS
Paul Eakin, Chairman

Dean’s Fellowship (2) 9000 9 34 Teaching
Fellowship (3) 5400–8000 9 464
Teaching Assistantship (40) 5700–6200 9 464 20

KENTUCKY

DEAN’S FELLOWSHIPS IN MATHEMATICS
UNIVERSITY OF KENTUCKY
$9000/9 months, fees paid, renewable

The stipend includes $2850 from a half-time Teaching Assistantship, which entails one course per semester of three to four contact hours per week. Supplementary Summer support is often available. Applications from well-qualified students are invited for the academic year 1983-84, and will also be considered for other forms of support, including other Fellowships and Assistantships. For several years the Department of Mathematics has supported all of its graduate students.

The full-time faculty of 47 is distinguished. Teaching and research is carried on in a diversity of fields in both pure and applied mathematics.

Programs of graduate study leading to Ph.D. and Master’s degrees are offered for careers in industry, teaching, and research.

More information and application forms are available upon request to

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

or call toll-free
November 15 to May 15
1-800-354-9507

Supported by the Chancellor, the Dean of the Graduate School, and the Dean of the College of Arts and Sciences

739
<table>
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<td>DEPARTMENT OF STATISTICS</td>
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<td>J. Gani, Chairman</td>
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<tr>
<td>University of Louisville, Louisville 40292</td>
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<td>DEPARTMENT OF MATHEMATICS</td>
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<td>Roger H. Geeslin, Chairman</td>
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<td>Western Kentucky University, Bowling Green 42101</td>
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<td>Robert C. Bueker, Chairman</td>
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<td>Louisiana State University, Baton Rouge 70803</td>
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<td>*</td>
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<td>DEPARTMENT OF EXPERIMENTAL STATISTICS</td>
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<td>*Summer support is also available.</td>
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**SYSTEMS SCIENCE**

Louisiana State University, Baton Rouge, Louisiana 70803, offers the degree of Masters of Science in System Science. In this interdisciplinary program the student selects course work from the areas of operations research, cybernetics, foundations of system science, computer science, data structures and management, system simulation and numerical analysis or statistics and then applies this work in a field of specialization. Some assistantships are available as are part-time jobs. For further information contact:

**Walter Rudd, Chairman**
Department of Computer Science
### Louisiana Tech University, Ruston 71272

**DEPARTMENT OF MATHEMATICS AND STATISTICS**

**B. J. Attebery, Head**

- **Fellowship** (5)
  - 1000–2000
  - 9
  - 755
  - 12-15 Teaching and/or grading

- **Teaching Assistantship** (9)
  - 4000
  - 9
  - 755

**McNeese State University, Lake Charles 70609**

**DEPARTMENT OF MATHEMATICAL SCIENCES**

**Harlin W. Brewer, Head**

- **Fellowship** (5)
  - 1000–2000
  - 9
  - 684

- **Teaching Assistantship** (4)
  - 4000–6000
  - 9
  - 684

**Northwestern State University of Louisiana, Natchitoches 71457**

**DEPARTMENT OF MATHEMATICS**

**Stan Chadick, Head**

- **Fellowship** (5)
  - 1000–2000
  - 9
  - 684

- **Teaching Assistantship** (4)
  - 4000
  - 9
  - 580

**Tulane University, New Orleans 70118**

**DEPARTMENT OF MATHEMATICS**

**Michael W. Mislove, Chairman**

- **Fellowship** (5)
  - 1000–2000
  - 9
  - 175 fees

- **Teaching Assistantship** (25)
  - 4800–8000
  - 8

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### GRADUATE FACULTY AND RESEARCH AREAS

**Mathematics Graduate Program at LSU**

- **Degree Programs**
  - A traditional plan of doctoral studies, providing a background in modern mathematics and requiring a dissertation which makes an original and interesting contribution in mathematical research. Such a program may involve a minor outside mathematics.

  - An alternative plan of doctoral studies, conducted with the help of the Department of Computer Science, including both a liberal education in modern mathematics and a minor in computer science, and requiring a dissertation in computer-related or other applied mathematics. Flexible master's programs (Master of Science, Master of Arts, Master of Natural Sciences) which prepare students either for a doctoral program or for a variety of employment opportunities.

- **Financial Aid**
  - Graduate teaching assistantships, which will pay $6,000 for the 83-84 academic year, are available. Teaching assistants teach six hours per week of lower-division mathematics courses. Applicants with excellent credentials are considered for departmental teaching fellowships paying $7,000 a year and placed in the university-wide competition for 30 LSU Alumni Federation Fellowships paying $10,000 tax-free. Graduate assistants and fellows are exempt from all tuition and University fees except for a $75 Activity Fee each semester. Applications for these positions should be received by March 10 (February 1 for Fellowship consideration.)

- **Graduate Faculty and Research Areas**
  - Particularly strong research areas at LSU include:
    - **Algebra and Analytic Geometry:** W. Adkins (Oregon), C. N. Delzell (Stanford), J. W. Hoffman (Harvard), R. F. Lax (M.I.T.), A. Noble (M.I.T.), J. E. Chrin (Berkeley)
    - **Algebra and Differential Topology:** P. E. Conner (Princeton), P. M. Ciarlet (Berkeley), N. Stoilts (Princeton), S. H. Weintraub (Princeton)
    - **Combinatorics and Graph Theory:** B. Bollobas (Budapest; Cambridge) J. G. Oxley (Oxford), C. B. Reid (Illinois), A. Thomason (Cambridge), A. L. Wold (Oxford), N. Wormald (Newcastle)
    - **Commutative Algebra and Algebraic Number Theory:** H. S. Butz (Ohio State), C. M. Cordes (Maryland), J. Hurrelbrink (Gottingen), J. E. Chrin (Berkeley), R. Perlis (M.I.T.), J. Yanik (Kentucky)
    - **Functional Analysis:** M. Altman (Tashkent), B. Bollobas (Budapest; Cambridge), H. S. Collins (Tulane), J. R. Dorroh (Texas), J. R. Retherford (Florida State)
    - **Harmonic Analysis:** R. C. Fabec (Colorado), O. C. McGehee (Yale), L. F. Richardson (Yale)
    - **Infinite Dimensional Topology:** D. W. Curtis (Iowa State)
    - **Partial Differential Equations:** C. E. Collins (Indiana), J. R. Dorroh (Texas)
    - **Probability:** E. Gine (M.I.T.), H.-H. Kuo (Cornell), D. M. Klein (Cornell), T. E. Wood (Virginia)
    - **Topological Algebra:** J. A. Hildebrand (Tennessee), R. J. Koch (Tulane), J. D. Lawson (Tennessee)

For more information and an application form, write to:
Professor Neal W. Stolzhus
Director of Graduate Studies
Department of Mathematics
Louisiana State University
Baton Rouge, LA 70803-4918
The Ph.D. program provides a broad background in mathematics and requires a dissertation consisting of original and significant research. Besides the traditional research assistantships, the Ph.D. program may concentrate on statistics or on numerical computation.

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

The teaching assistantships (an increase for 1983-84 is expected) consist of a stipend of $4800-$6200 and a tuition waiver. The duties consist of four hours of teaching per week. Special teaching fellowships paying $8000 per year are also available to exceptional, advanced graduate students. Applications for these positions should be received by February 1, 1983 but later applications will also be considered.
UNIVERSITY OF MARYLAND BALTIMORE COUNTY

M.S. and Ph.D. in Applied Mathematics


Teaching Assistantships: $5700–6000 with remission of fees.

Apply to:

Dr. N. P. Bhatia, Director
Graduate Program in Applied Mathematics
Department of Mathematics and Computer Science
University of Maryland Baltimore County
Baltimore, Maryland 21228

University of Maryland, College Park 20742
DEPARTMENT OF MATHEMATICS
John Osborn, Chairman

Applications due: 3/1/83
Faculty 90; Published 64
Bachelor’s by inst. 5390
Bachelor’s by dept. 40
Master’s by dept. 13
Ph.D. (79/82) ANT 4, AFA 7, GT 4, L 1, P 1, S 1, AM 12.
Total: 30

Teaching Fellowship (1) 8076–8232 12 *
Teaching Assistantship (110) 5685–6860 10 * 6 Education
*10 hours remitted.

MASSACHUSETTS

Babson College, Babson Park 02157
DIVISION OF MATHEMATICS AND SCIENCE
John C. Saber, Chairman

Applications due: 6/83
Faculty 13; Published 13
Bachelor’s by inst. 300
Bachelor’s by dept. 30
Master’s by dept. 50

Teaching Assistantship (12) 1100–1200 9
10 Grading, research

Boston College, Chestnut Hill 02167
DEPARTMENT OF MATHEMATICS
Paul R. Thie, Chairman

Applications due: 3/15/83
Faculty 22; Published 13
Bachelor’s by inst. 1926
Bachelor’s by dept. 78
Master’s by dept. 4

Teaching Fellowship (10) 5000 9
6 Education

Boston University, Boston 02215
DEPARTMENT OF MATHEMATICS
Dennis D. Berkey, Chairman

Applications due: 2/1/83
Faculty 41; Published 33
Bachelor’s by inst. 3199
Bachelor’s by dept. 55
Master’s by dept. 12
Ph.D. (79/82) AFA 1, S 4, CS 3, GT 1, AM 12.
Total: 9

Teaching Fellowship (25) 5400 9
12 Teaching, research

Brandeis University, Waltham 02254
DEPARTMENT OF MATHEMATICS
David Eisenbud, Chairman

Applications due: 2/1/83
Faculty 21; Published 20
Bachelor’s by inst. 626
Bachelor’s by dept. 11
Master’s by dept. 4
Ph.D. (79/82) ANT 10, AFA 1, GT 5. Total: 16

Teaching Fellowship (8) 5050–6000* 9
10-12 Teaching, teaching, research, grading
*1982–83 rates, increase expected. All awards include full tuition scholarship.

Harvard University, Cambridge 02138
DEPARTMENT OF MATHEMATICS
D. Mumford, Chairman

Applications due: 3/15/83
Faculty 25; Published 25
Bachelor’s by inst. 1612
Ph.D. (79/82) AFA 6, S 1, CS 3, GT 10, L 3, P 1, S 1. Total: 26

Fellowship (25) 4500–7200 9-12 *
Teaching Fellowship (17) 5310 9-12 * 3 Office
Research Assistantship (10) 5220–6720 9-12 * Research
*1982–1983: $8425 first two years, $2330 second two years, $980 after.
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
  Sponsored by 12 departments, the Program 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, 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).

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

**RESEARCH CLIMATE:** A number of distinguished mathematicians from Universities throughout the world visit Maryland each semester. Each year is designated a “Special Year” in a particular area of mathematics. This year the topic is Lie Group Representations. In addition, there is an active seminar program with both internal and external speakers.

**FINANCIAL AID:** Teaching assistantships are readily available to qualified students. Fellowships for outstanding applicants and Work-Study Programs with various government agencies (e.g., NSA and NSWL) are available.

**FOR FURTHER INFORMATION, PLEASE WRITE TO:**

Mathematics Graduate Committee
Department of Mathematics
UNIVERSITY OF MARYLAND
College Park, MD 20742
<table>
<thead>
<tr>
<th>TYPE OF ASSISTANCE</th>
<th>STIPEND</th>
<th>FEES</th>
<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
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<td>student ($)</td>
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<td>DEPARTMENT OF STATISTICS</td>
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<td>Bachelor's by inst.</td>
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<td>Arthur P. Dempster, Chairman</td>
<td>Faculty 5; Published 5</td>
<td>Bachelor's by dept.</td>
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<td>Teaching Fellowship (12)</td>
<td>3060–3540*</td>
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<td>Master's by dept.</td>
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<td>Research Assistantship (10)</td>
<td>3456*</td>
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<td>8470*</td>
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<td>Ph.D. (79/82)</td>
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<tr>
<td>**4 hours contact, 1 hour teaching, 3 hours grading (weekly average).</td>
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<tr>
<td>***32 hours per month of directed research.</td>
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<td></td>
<td>4 According to need.</td>
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<td># According to need.</td>
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<tr>
<td>Harvard University, School of Public Health, Boston 02115</td>
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<td>DEPARTMENT OF BIOSTATISTICS</td>
<td>Applications due: 3/1/83</td>
<td>Bachelor's by inst.</td>
<td>1612</td>
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<td>Marvin Zelen, Chairman</td>
<td>Faculty 30; Published 30</td>
<td>Bachelor's by dept.</td>
<td>58</td>
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<td>Teaching Assistantship (15)</td>
<td>2000–4000</td>
<td>8000</td>
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<td>Research Assistantship (10)</td>
<td>4000–12000</td>
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<td>Research</td>
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<td>2500–5000</td>
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<td>Traineeship (4)</td>
<td>50000</td>
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<td>Massachusetts Institute of Technology, Cambridge 02139</td>
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<td>DEPARTMENT OF MATHEMATICS</td>
<td>Applications due: 1/14/83</td>
<td>Bachelor's by inst.</td>
<td>1128</td>
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<td>Daniel J. Kleitman, Chairman</td>
<td>Faculty 88; Published 68</td>
<td>Bachelor's by dept.</td>
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<td>Fellowship (17)</td>
<td>3960–6500</td>
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<td>*</td>
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<td>Research Assistantship (6)</td>
<td>14058</td>
<td>8700</td>
<td>Research</td>
<td>GT 13, L 2, P 4, S 1, CS 3,</td>
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<td>Scholarship (1)</td>
<td>9</td>
<td>8700</td>
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<td>OR 1, AM 10, ME 2, Other 7.</td>
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<td>#Scholarship.</td>
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<td>***6 teaching, 16 grading papers.</td>
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<tr>
<td>Northeastern University, Boston 02115</td>
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<td>DEPARTMENT OF MATHEMATICS</td>
<td>Applications due: 3/15/83</td>
<td>Bachelor's by inst.</td>
<td>15</td>
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<td>M. E. Gilmore, Chairman</td>
<td>Faculty 55; Published 31</td>
<td>Bachelor's by dept.</td>
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<td>Teaching Assistantship (33)</td>
<td>5500</td>
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<td>Master's by dept.</td>
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<td>Tuitionship (7)</td>
<td>4-8</td>
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<td>Grading, workshop</td>
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<td>#3 hours teaching, 3 conference hours.</td>
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<tr>
<td>Tufts University, Medford 02155</td>
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<td>DEPARTMENT OF MATHEMATICS</td>
<td>Applications due: 3/15/83</td>
<td>Bachelor's by inst.</td>
<td>1046</td>
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<td>Richard Weiss, Chairman</td>
<td>Faculty 19; Published 14</td>
<td>Bachelor's by dept.</td>
<td>32</td>
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<td>Teaching Assistantship (6)</td>
<td>4100–4400</td>
<td>9</td>
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<td>Master's by dept.</td>
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<td>Scholarship (3)</td>
<td>9</td>
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<td>3C Teaching</td>
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<td>#An appropriate tuition scholarship is provided with each Teaching Assistantship.</td>
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<tr>
<td>University of Lowell, Lowell 01854</td>
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<td>DEPARTMENT OF MATHEMATICS</td>
<td>Applications due: 6/1/83</td>
<td>Bachelor's by inst.</td>
<td>1199</td>
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<td>Alan W. Doer, Chairman</td>
<td>Faculty 40; Published 23</td>
<td>Bachelor's by dept.</td>
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<td>Teaching Assistantship (16)</td>
<td>4000</td>
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<td>Waived</td>
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<td>#Or 12 hours per week grading, etc.</td>
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<td>Teaching*</td>
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<tr>
<td>University of Massachusetts, Amherst 01003</td>
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<td>DEPARTMENT OF MATHEMATICS AND STATISTICS</td>
<td>Applications due:*</td>
<td>Bachelor's by inst.</td>
<td>3981</td>
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<td>Larry N. Mann, Head</td>
<td>Faculty 59; Published 44</td>
<td>Bachelor's by dept.</td>
<td>29</td>
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<td>Fellowship (4)</td>
<td>4400–4800</td>
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<td>Master's by dept.</td>
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<td>Teaching Assistantship (51)</td>
<td>4400–4800</td>
<td>9-12</td>
<td>20</td>
<td>Ph.D. (79/82)</td>
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<td>Research Assistantship (3)**</td>
<td>4400–4800</td>
<td>12</td>
<td>20</td>
<td>ANT 4, AFA 1,</td>
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<td>#Fellowships: 2/1/83; assistantships: no deadline.</td>
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<td>GT 3, P 1, S 1. Total: 10</td>
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<tr>
<td>**Subject to availability of grant funding.</td>
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</table>
University of Massachusetts at Boston 02125

DEPARTMENT OF MATHEMATICAL SCIENCES
Colin Godfrey, Chairman

Applications due: 4/15/83
Faculty 30; Published 13

Teaching Assistantship (4)
4000 9 Waived 3¢

Central Michigan University, Mt. Pleasant 48859

DEPARTMENT OF MATHEMATICS
Richard J. Fleming, Chairman

Applications due: 3/1/83
Faculty 37; Published 14

Fellowship (12)
4200 9 6¢
Teaching Assistantship (10)
5000–6000 9 56/cr. hr. 6¢

University of Massachusetts at Amherst

GRADUATE STUDIES. M.A. and Ph.D. programs in pure and applied mathematics and statistics. Active departmental and interdisciplinary research environment.

TEACHING ASSISTANTSHIPS. 3–4 contact hours/week. Tuition waiver. Possible summer teaching. Fellowships for qualified applicants.

ATTRACTIONAL 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. For information write

Director of Graduate Admissions
Department of Mathematics and Statistics
University of Massachusetts
Amherst, Massachusetts 01003

Master of Arts in Mathematics

The Graduate Program in Mathematics offers courses and independent study in algebra, analysis, topology, geometry, probability, and applied mathematics. Master's level courses in computer science will be offered in 1983. Classes are scheduled in the late afternoon and early evening. Part-time students are welcome, and efforts are made to schedule classes to accommodate working students as well as teachers.

Qualified applicants may be eligible for financial aid in the form of teaching assistantships and waivers of tuition.

For information, write:

Graduate Program in Mathematics
University of Massachusetts at Boston
Harbor Campus
Boston
Massachusetts 02125

UMass/Boston is an Affirmative Action/Equal Opportunity Institution.
Eastern Michigan University, Ypsilanti 48197
DEPARTMENT OF MATHEMATICS AND
COMPUTER SCIENCE
J. H. Northey, Head
Applications due: 4/1/83
Faculty 25; Published 5
Graduate Assistance (1 or 2) 3150–3350 9 * 20 Varies
*Tuition up to and including eight (8) semester hours per full time appointment
for the Fall and Winter semesters will be awarded.

Michigan State University, East Lansing 48823
DEPARTMENT OF MATHEMATICS
J. E. Adney, Chairman
Applications due: 4/1/83
Faculty 60; Published 60
Teaching Assistantship (125) 6800–7600 9 1600 4-8\textsuperscript{c}

Michigan Technological University, Houghton 49931
DEPARTMENT OF MATHEMATICAL AND
COMPUTER SCIENCES
Richard Millman, Head
Applications due: Open
Faculty 45; Published 26
Teaching Assistantship (10-15) 4950 9 5-8\textsuperscript{c} Teaching

Oakland University, Rochester 48063
DEPARTMENT OF MATHEMATICAL SCIENCES
Irwin E. Schochetman, Acting Chair
Applications due: 3/15/83
Faculty 27; Published 17
Teaching Assistantship (3) 6000–6500 9 20 Grading, teaching

University of Michigan, Ann Arbor 48109
DEPARTMENT OF MATHEMATICS
F. W. Gehring, Chairman
Applications due: 2/1/83
Faculty 65; Published 59
Fellowship (1-3) 3000–6500 8
Teaching Assistantship (90) 4415–8200 8 686/term 4-6\textsuperscript{c} Teaching
Student Assistantship (50) 724–3120 8 1458/term 4-12 Grading

DEPARTMENT OF STATISTICS
Michael B. Woodroofe, Chairman
Applications due: Open
Faculty 13; Published 11
Teaching Assistantship (15) 4000–7500 9 1650 10-20 Grading, teaching

Wayne State University, Detroit 48202
DEPARTMENT OF MATHEMATICS
B. J. Eisenstadt, Chairman
Applications due: 3/1/83*
Faculty 48; Published 35
Fellowship (2) 4500** 9
Teaching Assistantship (22) 4500–6550** 9 6\textsuperscript{c} Teaching
*Late applications will be accepted.
**Stipend includes health insurance.

Western Michigan University, Kalamazoo 49008
DEPARTMENT OF MATHEMATICS
James H. Powell, Chairperson
Applications due:* Faculty 34; Published 24
Fellowship (5) 2500–5000 8 $4/\text{cr. hr.}
Teaching Fellowship (5) 2500–5000 8 $4/\text{cr. hr.} 3\textsuperscript{c}
Teaching Assistantship (25) 5000 8 $4/\text{cr. hr.} 6\textsuperscript{c}
Research Assistantship (2) 7500–10000 12 $4/\text{cr. hr.} 20
Spring or Summer Teaching Assistantship (20) 1250 2 $4/\text{cr. hr.} 6\textsuperscript{c}
*Fellowships: 2/15/83; assistantships: 3/1/83.
WAYNE STATE UNIVERSITY
GRADUATE STUDY IN
MATHEMATICS

The Mathematics Department offers graduate programs leading to the M.A. and Ph.D. degrees. Master's degrees are offered in mathematics, applied mathematics, and statistics. Doctoral students may specialize in a variety of areas, including combinatorics, algebra, classical and functional analysis, differential equations, geometry and topology, probability and statistics, and applied mathematics. The department presently includes forty-seven full-time faculty, and a favorable student/faculty ratio allows for individual attention.

Financial support includes teaching assistantships with stipends in the range $4500-$6550 together with a waiver of tuition up to 10 credit hours. Fellowships and housing allowances are also available to well-qualified students. The suggested deadline for completion of applications is March 1; applicants meeting this deadline will be notified in time to respond by April 15. Late applications, however, will be accepted as long as openings remain.

Direct inquiries to: B.J. Eisenstadt, Chairman
Department of Mathematics
Wayne State University
Detroit, Michigan 48202

Wayne State University is an Equal Opportunity/Affirmative Action Employer.

WESTERN MICHIGAN UNIVERSITY

The Mathematics Department at Western Michigan University consists of 35 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 and Teaching of Mathematics. In addition to the Ph.D. in Mathematics, the department also offers a Ph.D. in Mathematics with a concentration in Statistics, a concentration in Graph Theory and Computer Science, or a concentration in Mathematics Education.

SPECIAL OPPORTUNITIES

In 1984 the WMU Math Department will host, for the fifth time, an International Graph Theory Conference. The Department is internationally acclaimed in the field of Graph Theory. 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

Graduate Teaching Assistantships, which pay $2,500/semester for 1982-83, consist of teaching 5 to 6 credit hours of freshman-level mathematics courses. Doctoral Fellowships of $2,500/semester are also available. Additional $1,250 assistantships are available for teaching either Spring or Summer term. Applications for Fellowships are due by February 15. Assistantships by March 1. Late applications for assistantships will be accepted if openings remain. Remission of out-of-state tuition is expected to be available.

For additional information contact:
Dr. James H. Powell
Department of Mathematics
Western Michigan University
Kalamazoo, Michigan 49008

WMU is an Equal Opportunity/Affirmative Action Institution.
MINNESOTA

Mankato State University, Mankato 56001
DEPARTMENT OF MATHEMATICS, ASTRONOMY AND STATISTICS
C. D. Alders, Chairperson

Applications due: 4/1/83
Faculty 18; Published 3
Bachelor’s by inst. 1200
Bachelor’s by dept. 30
Master’s by dept. 30

Teaching Assistantship (15) 3000–5000 9 600 15

University of Minnesota, Minneapolis 55455
BIOMETRY DIVISION
M. Kjelsberg, Head

Applications due: 4/15/83
Faculty 9; Published 8
Bachelor’s by inst. 6200
Bachelor’s by dept. 4
Master’s by dept. 11
Ph.D. (79/82) Other 2. Total: 2

Fellowship (3) 5040 12
Teaching Assistantship (4) 6800 9 20 Grading
Research Assistantship (4) 9000 12 20 Research

DEPARTMENT OF MATHEMATICS
Willard Miller, Jr., Head

Applications due: 2/15/83
Faculty 80; Published 62
Bachelor’s by inst. 6200
Bachelor’s by dept. 30
Master’s by dept. 8
Ph.D. (79/82) ANT 4, AFA 20.
GT 3, L 1, P 4. Total: 32

Fellowship (1–4) 4600–5000 9
Teaching Fellowship (1–6) 7850–8250* 9 81/qtr. 2c Teaching
Teaching Assistantship (85) 6500–7200* 9 55/cr.*+ 4–5c Teaching
Summer Teaching Assistantship (28) 1100–1200* 1½ 10 Teaching
Summer Fellowship (12) 1400–1600* 2 Research
*Plus expected 9% increase for 1983–84.
**Plus $81 per quarter for fees.

Mathematics at Minnesota

The University of Minnesota offers graduate programs leading to the M.S. and Ph.D. degrees. There are seventy-nine full-time faculty members. Almost all areas of mathematics are represented, with particular strengths in analysis and applied mathematics. The Institute of Mathematics and Its Applications commenced operation at the University of Minnesota in September 1982. There are extensive opportunities for interaction with various engineering, science, and social science departments. Faculty-student ratio is 3:4; there is an excellent library in the mathematics building and office space is provided. Fellowships and Teaching Assistantships are available. Write to:

Professor Robert Hardt
Department of Mathematics
127 Vincent Hall, 206 Church Street S.E.
University of Minnesota
Minneapolis, Minnesota 55455

749
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<tr>
<th>TYPE OF ASSISTANCE</th>
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<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
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<td>(number anticipated 1983–1984)</td>
<td>paid to student</td>
<td>paid by student ($)</td>
<td>hours type of service</td>
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<td>Applications due: 3/15/83</td>
<td>Faculty 17; Published 16</td>
<td>Bachelor's by inst. 6200</td>
<td>Bachelor's by dept. 8</td>
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<td>Seymour Geisser, Director</td>
<td>Fellowship (4)</td>
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<td>Teaching Assistantship**</td>
<td>6900</td>
<td>9</td>
<td>20</td>
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<td>Research Assistantship**</td>
<td>6550</td>
<td>9</td>
<td>20</td>
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<td>Project Assistantship**</td>
<td>6900</td>
<td>9</td>
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<td>*Resident: $53; nonresident: $145.75. **Number available not known.</td>
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</table>

**MISSISSIPPI**

Jackson State University, Jackson 39217
DEPARTMENT OF MATHEMATICS
Roosevelt Gentry, Head

Teaching Fellowship (8) | 2665 | 12 | 6c Teaching |
Teaching Assistantship (1) | 2665 | 12 | 6c Teaching |
Research Assistantship (3) | 4500 | 12 | |

University of Mississippi, University 38677
DEPARTMENT OF COMPUTER SCIENCE
Robert R. Little, Chairman

Teaching Assistantship (4) | 4000–5800 | 9 | 1085* 6c Teaching |
*Additional $1,026 fee for nonresident, waived for Assistantship award. |

University of Southern Mississippi, Hattiesburg 39406
DEPARTMENT OF COMPUTER SCIENCE AND STATISTICS
Danny R. Carter, Chairman

Teaching Assistantship (7) | 4500 | 9 | * | 20 Teaching, grading |
Research Assistantship (3) | 4500–5500 | 9 | * | 20 Research |
*Out-of-state tuition waived. |

DEPARTMENT OF MATHEMATICS
Steve Dobbin, Chairman

Teaching Assistantship (5-8) | 4200–6700 | 9 | 916 | 20 Grading, teaching |
Part-time Instructorship (Open) | 900–3600 | 9 | * | 10-20 Grading, teaching |
Tutor/Teaching Assistantship (Open) | 2.85/hr.–5/hr. | 9 | * | 10-20 Grading, tutoring |

**MISSOURI**

Central Missouri State University, Warrensburg 64093
DEPARTMENT OF MATHEMATICAL SCIENCES
Edward Davenport, Chair

Teaching Assistantship (6) | 2700–5400 | 9 | 600/yr. | 5-10 Teaching |

Saint Louis University, St. Louis 63103
DEPARTMENT OF MATHEMATICAL SCIENCES
Raymond Freese, Chair

Fellowship (10) | 4200 | 9 | * | 6c Teaching |
*Six hours tuition remission each semester. |

Southeast Missouri State University, Cape Girardeau 63701
DEPARTMENT OF MATHEMATICS
Harold W. Hager, Chairman

Teaching Fellowship (3) | 3150 | 9 | Waived | 6c |

750
University of Missouri-Columbia 65211
DEPARTMENT OF MATHEMATICS
Dennis F. Sentilles, Chairman
Applications due: 4/30/83
Faculty 30; Published 21
Bachelor's by Inst. 3412
Bachelor's by dept. 7
Master's by dept. 5
Ph.D. (79/82) ANT 1, GT 1, AM 2. Total: 4
University of Missouri-Rolla 65401
DEPARTMENT OF ENGINEERING MECHANICS
Peter G. Hansen, Chairman
Applications due: Open
Faculty 16; Published 7
Bachelor's by Inst. 929
Bachelor's by dept. 6
Master's by dept. 6
Ph.D. (79/82) S S. Total: 5
University of Missouri-St. Louis 63121
DEPARTMENT OF MATHEMATICAL SCIENCES
Grant Welland, Chairman
Applications due: Open
Faculty 16; Published 16
Bachelor's by dept. 16
Washington University, St. Louis 63130
DEPARTMENT OF MATHEMATICS
Robert H. McDowell, Chairman
Applications due: 2/15/83
Faculty 23; Published 21
Bachelor's by Inst. 1105
Bachelor's by dept. 22
Master's by dept. 5
Ph.D. (79/82) ANT 1, AFA 6, GT 1, Other 1. Total: 9
Doctoral Programs In Systems Science and Mathematics
WASHINGTON UNIVERSITY IN ST. LOUIS
The Department of Systems Science and Mathematics is involved in research in frontier areas of Systems Science and Control Theory, including algebraic system theory, control on manifolds, stochastic control, nonlinear estimation theory, control of quantum mechanical systems, martingales, control of nonlinear systems, optimal control, nonlinear programming, finite elements, and partial differential equations. Extensive research is also conducted in various mathematical topics in engineering, economics, and biology.
Research assistantships leading to the D.Sc. degree are available each year. The only required duties of research assistants are those relating to their own thesis work, usually beginning after their second year at Washington University.
For further information write to:
Professor John Zaborszky, Department of Systems Science and Mathematics
Box 1040, Washington University, St. Louis, Missouri, 63130

751
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<th>TYPE OF ASSISTANCE</th>
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<th>SERVICE REQUIRED</th>
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<td><strong>DEPARTMENT OF SYSTEMS SCIENCE</strong>&lt;br&gt; AND MATHEMATICS&lt;br&gt;John Zaborszky, Chairman</td>
<td>Applications due: 1/31/83&lt;br&gt;Faculty 9; Published 9</td>
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<td>Bachelor's by inst. 1105&lt;br&gt;Bachelor's by dept. 21&lt;br&gt;Master's by dept. 11</td>
<td><strong>Ph.D. (79/82) Other 14.</strong>&lt;br&gt;Total: 14</td>
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<td>Research Assistantship (10)</td>
<td>8730*&lt;br&gt;9</td>
<td>5130</td>
<td>0-20 Research, grading**&lt;br&gt;*1982–83 rates. **Grading appointment is optional and carries additional stipend.</td>
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<tr>
<td><strong>MONTANA</strong></td>
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<tr>
<td><strong>Montana State University, Bozeman 59717</strong>&lt;br&gt;K. Tiahrt, Head</td>
<td>Applications due: 3/15/83&lt;br&gt;Faculty 36; Faculty 26</td>
<td></td>
<td>Bachelor's by inst. 1600&lt;br&gt;Bachelor's by dept. 18&lt;br&gt;Master's by dept. 8</td>
<td><strong>Ph.D. (79/82) AFA 3, S 3.</strong>&lt;br&gt;Total: 6</td>
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<td>Fellowship (2)</td>
<td>500</td>
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<td>5900–11000</td>
<td>9, 350</td>
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<td>Research Assistantship (5)</td>
<td>5900–11000</td>
<td>9, 350</td>
<td>13</td>
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<td><strong>University of Montana, Missoula 59812</strong></td>
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<td><strong>DEPARTMENT OF MATHEMATICAL SCIENCES</strong>&lt;br&gt;Charles A. Bryan, Chairman</td>
<td>Applications due: 4/1/83&lt;br&gt;Faculty 20; Published 12</td>
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<td>Bachelor's by inst. 1202&lt;br&gt;Bachelor's by dept. 3&lt;br&gt;Master's by dept. 2</td>
<td><strong>Ph.D. (79/82) ANT 2, AFA 3, S 1, OR 1. Total: 7</strong></td>
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<td>Teaching Assistantship (20)</td>
<td>4800–6500*&lt;br&gt;**</td>
<td>5-6*C Teaching</td>
<td><strong>Includes extra stipend as Editorial Assistant.</strong></td>
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<td><strong>NEBRASKA</strong></td>
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<td><strong>Kearney State College, Kearney 68847</strong>&lt;br&gt;Charles G. Pickens, Chairman</td>
<td>Applications due: 4/15/83&lt;br&gt;Faculty 11</td>
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<td>Bachelor's by inst. 500&lt;br&gt;Bachelor's by dept. 50&lt;br&gt;Master's by dept. 5</td>
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<td>2700</td>
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<td>6 Teaching</td>
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<td><strong>University of Nebraska—Lincoln 68588</strong>&lt;br&gt;Roy F. Keller, Chairman</td>
<td>Applications due: 7/83&lt;br&gt;Faculty 14; Published 14</td>
<td></td>
<td>Bachelor's by inst. 3000&lt;br&gt;Bachelor's by dept. 39&lt;br&gt;Master's by dept. 23</td>
<td><strong>Ph.D. (79/82) CS 3. Total: 3</strong></td>
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<td>7000–10000</td>
<td>9 Waived</td>
<td>18-22 Teaching</td>
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<td>7000–10000</td>
<td>9 Waived</td>
<td>18-22 Research</td>
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<td><strong>DEPARTMENT OF MATHEMATICS AND STATISTICS</strong>&lt;br&gt;David Skoug, Chairman</td>
<td>Applications due: 5/1/83&lt;br&gt;Faculty 37; Published 30</td>
<td></td>
<td>Bachelor's by inst. 3000&lt;br&gt;Bachelor's by dept. 50&lt;br&gt;Master's by dept. 9</td>
<td><strong>Ph.D. (79/82) ANT 2, AFA 4, S 2, CS 2, OR 1. Total: 11</strong></td>
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<td>6300–8500</td>
<td>9, 160</td>
<td>4-6*C Teaching</td>
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</table>

**Ph.D. in Mathematical Sciences**<br>at the<br>**UNIVERSITY OF MONTANA**

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. Residents of the city of Missoula enjoy unequalled opportunities to participate in such outdoor activities as skiing, backpacking, canoeing, hunting and fishing. For details, please write for the "Ph.D. Packet" to<br>

Chairman, Graduate Committee<br>Mathematics Department, University of Montana, Missoula, Montana 59812
<table>
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<th>TYPE OF ASSISTANCE</th>
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<td>paid by student ($) months</td>
<td>hours type of week of service</td>
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<td>NEVADA</td>
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<tr>
<td>University of Nevada, Reno 89557</td>
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<tr>
<td>R. N. Tompson, Chairman</td>
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<tr>
<td>Teaching Assistantship (4)</td>
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<td>NEW HAMPSHIRE</td>
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<td>Dartmouth College, Hanover 03755</td>
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<td>DEPARTMENT OF COMPUTER AND INFORMATION SCIENCE</td>
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<td>Stephen J. Garland, Chairman</td>
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<td>Fellowship ($)</td>
<td>3000–6500 9</td>
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<td>University of New Hampshire, Durham 03824</td>
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<td>Richard H. Balomenos, Chairman</td>
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<td>Teaching Assistantship (8)</td>
<td>4400–5400 9</td>
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<td>6100–6800 9</td>
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<td>UNIVERSITY OF NEVADA, RENO</td>
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<td>New graduate program leading to a M.S. degree in COMPUTER SCIENCE is being offered. The curricula is structured around four areas of studies in accord with professional career goals: (1) operation research applications, (2) systems programming, (3) applications programming, (4) computer engineering and communications. Entering students should have a bachelor's degree in mathematics, engineering, or one of the natural sciences. Computer facilities include the University Control Data Cyber 730 operating under NOS and the Departmental minicomputers PDP 11/45 running under UNIX, and PDP 11/35 running under RSTS/E. A Departmental computer science laboratory provides students with exposure to a wide variety of languages and operating systems and actual hands-on experience. For information relative to admission into the program and available Assistantships, write: COMPUTER SCIENCE, Department of Mathematics, University of Nevada, Reno, Reno, NV 89557.</td>
<td>AA/EEO</td>
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UNIVERSITY OF NEW HAMPSHIRE

Offers a stimulating, informal atmosphere for teaching and learning mathematics while earning a M.S. in MATHEMATICS or a Ph.D. in MATHEMATICS or MATHEMATICS EDUCATION.

• The University is located in a small New England town with easy access to the beaches of New Hampshire, the White Mountains and Boston.
• Financial Aid is available to virtually all students enrolled in the program.

Write: Samuel D. Shore, Director of Graduate Studies, Department of Mathematics, Kingsbury Hall, Durham, N.H. 03824

AA/EEO
NEW JERSEY

Fairleigh Dickinson University, Madison 07940
DEPARTMENT OF MATHEMATICS, COMPUTER SCIENCE AND PHYSICS
Peter Falley, Chairperson

Applications due: 4/15/83
Faculty 7; Published 1

Teaching Fellowship (2) 3600 9 6 Teaching

Princeton University, Princeton 08544
DEPARTMENT OF MATHEMATICS
Wu-chung Hsiang, Chairman

Applications due: 1/15/83
Faculty 41; Published 39

Fellowship (20) 6600 9-12
Teaching Assistantship (25)* 5160-5560 10 20 Teaching
Research Assistantship (30)* 4600-5100 10

*Most assistants ½ teaching, ½ research.

Rutgers University, New Brunswick 08903
DEPARTMENT OF MATHEMATICS
Charles C. Sims, Chairman

Applications due: 3/1/83
Faculty 86; Published 81

Fellowship (8) 5000 9
Teaching Assistantship (35) 6086-6386 9 12 Teaching
Research Assistantship (6) 6086-6386 9 4 Teaching

NEW MEXICO

Eastern New Mexico University, Portales 88130
DEPARTMENT OF MATHEMATICAL SCIENCES
Thurman Elder, Chairman

Applications due: Open
Faculty 41; Published 4

Teaching Assistantship (6) 4800-6000 9 700 6 Teaching

New Mexico Institute of Mining and Technology, Socorro 87801
DEPARTMENT OF MATHEMATICS
Alan Sharples, Chairman

Applications due: 3/30/83
Faculty 9; Published 5

Teaching Assistantship (7) 5600-5800 9 Waived 5-6 Teaching

New Mexico State University, Las Cruces 88003
DEPARTMENT OF COMPUTER SCIENCE
Mark B. Wells, Chairman

Applications due: 5/1/83
Faculty 11; Published 8

Teaching Assistantship (12) 5770 9 20
Research Assistantship (2) 5910 9 20

DEPARTMENT OF MATHEMATICAL SCIENCES
Carol L. Walker, Head

Applications due: 3/31/83
Faculty 39; Published 28

Teaching Assistantship (25) 5770-6040 9 33.25/hr/hr. 20 Teaching
Scholarship (2-4) 2710* 9

*In addition to assistantship.

University of New Mexico, Albuquerque 87131
DEPARTMENT OF MATHEMATICS AND STATISTICS
W. T. Kyner, Chairman

Applications due: 3/1/83
Faculty 41; Published 30

Teaching Assistantship (22) 5000-5300 9 Waived 5 Teaching
Title IV H.W. Grant, Graduate and Professional Fellowship (2)* 4500 12

*First year graduate minority students, including women.
NEW YORK

Adelphi University, Garden City 11530
DEPARTMENT OF MATHEMATICS AND
COMPUTER SCIENCE
Jonathan Hodgson, Chairman

Senior Teaching Fellowship (2) 7600 9 20
Teaching Assistantship (9) 3000–4500 9 20
Full Scholarship (5) 9
Tuition Scholarships—50%–54 credits per year.

Clarkson College, Potsdam 13676
DEPARTMENT OF MATHEMATICS
AND COMPUTER SCIENCE
Mark J. Ablowitz, Chairman

Teaching Assistantship (17) 7300 12 12 Grading, teaching, research
Research Assistantship (3) 7300 12 12 Research

NEW MEXICO STATE UNIVERSITY

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• Research Interests and Ph.D. Thesis Direction.

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• Teaching Assistantships and Part-time Job Opportunities Available.

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New Mexico State University
Las Cruces, NM 88003
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Clarkson offers the M.S. and Ph.D. in Mathematics with individual attention by an active research faculty in an attractive northern New York location. A broad mathematical curriculum is offered with emphasis on applied mathematics and computer science.


A number of research and teaching assistantships, and tuition scholarships are available. Special assistantships up to $10,000 plus tuition are available for highly qualified applicants.

Applications received by February 15, 1983 will be given early consideration.

Write to: R. J. Nunzi, Dean
Graduate School
Clarkson College
Potsdam, New York 13676

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<td>paid by student ($)</td>
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<td>Academic year</td>
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<td>Rensselaer Polytechnic Institute, Troy 12181</td>
<td>DEPARTMENT OF MATHEMATICAL SCIENCES</td>
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<td>Robert E. O'Malley, Jr., Chairman</td>
<td>Teaching Assistantship (3)</td>
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<td>200 fees 20</td>
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<td>Varies</td>
<td>Ph.D. (79/82) S 5, CS 1, OR 3, AM 6, Total: 15</td>
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State University College at Brockport 14420

DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

John G. Michaels, Chairman

Teaching Assistantship (3) | 3650 9 | 110 | 15 Tutoring, grading, etc. | |

State University of New York at Albany 12222

DEPARTMENT OF MATHEMATICS AND STATISTICS

Lindsay N. Childs, Chairman

Fellowship (2) | 6200 9 |
Teaching Assistantship (28) | 4700 9 | 3-4 Teaching |
Scholarship (1) | 3700 9 | 10 Grading |

Applications due: 3/15/83 | Faculty 37; Published 31 | Bachelor's by inst. 2478 |
| Faculty 20; Published 11 | Bachelor's by dept. 134 |
| Bachelor's by dept. 24 | |

Ph.D. (79/82) S 5, CS 1, OR 3, AM 6, Total: 8 |

State University of New York at Binghamton 13901

DEPARTMENT OF MATHEMATICAL SCIENCES

S. Zacks, Chairman

Graduate and Teaching Assistantship (35) | 4800–6100 9 Waived | 4-12 Teaching or grading |
Special (1) | 7200 12 Waived | 4 Teaching |

Applications due: 3/15/83 | Faculty 30; Published 20 |
| Bachelor's by inst. 1800 |
| Bachelor's by dept. 120 |
| Master's by dept. 14 |

Ph.D. (79/82) GT 3, S 4, AM 2, Total: 9 |

State University of New York at Buffalo, Amherst 14226

DEPARTMENT OF COMPUTER SCIENCE

Patricia J. Eberlein, Chairman

Fellowship (1-2) | 4100–6800 9 |
Teaching Assistantship (23) | 4100–6800 9 | 16 Grading, teaching |
Research Assistantship (8-10) | 4100–6800 9 | 16 Research |

Applications due: 2/28/83 | Faculty 10; published 9 |
| Bachelor's by inst. 2757 |
| Bachelor's by dept. 50 |
| Master's by dept. 18 |

Ph.D. (79/82) CS 4, Total: 4 |

DEPARTMENT OF STATISTICS

Peter Enis, Chairman

Teaching Assistantship (5) | 3700–6696 | 10-15 Teaching |
Graduate Assistantship (6) | 3700–6696 | 10-15 Grading |

Applications due: 5/11/83 | Faculty 7; Published 7 |
| Bachelor's by inst. 2757 |
| Bachelor's by dept. 20 |
| Master's by dept. 4 |

Ph.D. (79/82) P 2, Total: 2 |

State University of New York at Buffalo 14214

DEPARTMENT OF MATHEMATICS

Lewis A. Coburn, Chairman

Fellowship (1-3) | 5000–8000 9 | 135 |
Teaching Assistantship (28) | 3700–6293 9 | 135 | 4c Teaching |
Graduate Assistantship (15) | 3700–6293 9 | 135 | 12 Grading |

Applications due: * | Faculty 41; Published 41 |
| Bachelor's by inst. 2757 |
| Bachelor's by dept. 26 |
| Master's by dept. 15 |

Ph.D. (79/82) ANT 5, AFA 3, L 2, AM 1, Total: 11 |

State University of New York at Stony Brook 11794

DEPARTMENT OF APPLIED MATHEMATICS AND STATISTICS

Alan Tucker, Chair

Fellowship (2) | 6000 9 | Waived |
Teaching Assistantship (35) | 5000 9 | Waived | 15 Grading and teaching |
Research Assistantship (12) | 2000–6000 9 | Waived | 15 Research |

Applications due: Open | Faculty 18; Published 17 |
| Bachelor's by inst. 2100 |
| Bachelor's by dept. 75 |
| Master's by dept. 60 |

Ph.D. (79/82) S 3, OR 3, AM 8, Total: 14 |
**Teaching Assistantship (45)**
J. Heller, Chairman
Fellowship (4)
7000—8000 12 200 fees
Teaching Assistantship (20)
6000—7500 12 200 fees 12-14
Research Assistantship (10)
6000—7500 12 200 fees 12-14

**Fellowships:** 2/1/83; for first round of offers for assistantships: 3/1/83.

**Syracuse University, Syracuse**

**Teaching Assistantship (25)**
Ronald Douglas, Chairman
Fellowship
Research Assistantship

**Applications due:** 3/1/83
Faculty 39; Published 32

**Fellowship (2-4)**
5500—7000 9 Waived 5 Teaching
Teaching Assistantship (45)
5000—6000 9 Waived 10 Teaching
Research Assistantship (5-10)
2500—6000 9 Waived 10 Teaching

*Fellowships: 2/1/83; for first round of offers for assistantships: 3/1/83.*

**University of Rochester, Rochester 14627**

**Teaching Assistantship (18)**
L. J. Lardy, Chairman
J. Heller, Chairman
AM 1, L 2, P 1, AM 3. Total: 12

**Applications due:** 2/1/83
Faculty 32; Published 26

**Fellowship (2)**
5540 8.5
Teaching Assistantship (25)
5800—7000 8.5-10 6c

*Duties for both positions involve holding 3 recitation review sessions per week and spending 1 additional hour per week in a math study hall.*

**Duke University, Durham 27706**

**Teaching Assistantship (13)**
Michael C. Reed, Chairman
Teaching Fellowship (6)
8400—11400 9 4400 6c Help sessions
Teaching Assistantship (10)
10400 9 4400 6c Teaching

**Applications due:** 2/1/83
Faculty 24

**Fellowship (18)**
5500—6000 9 15 Grading, research

**Research Assistantship (5-10)**
2500—6000 9 Waived 10 Teaching

**University of Rochester, Rochester 14627**

**Fellowship (18)**
5500—6000 9 15 Research

**Applications due:** 2/1/83
Faculty 24

**Teaching Assistantship (18)**
5500—6000 9 15 Research

**DEPARTMENT OF MATHEMATICS**

**Applications due:** 2/1/83
Faculty 11; Published 11

**Duke University, Durham 27706**

**Teaching Assistantship (25)**
6000—8000 9 3-4 Assisting*
Teaching Assistantship (25)
4000—5000 9 3-4 Assisting*

**University of Rochester, Rochester 14627**

**Fellowship (18)**
5500—6000 9 15 Teaching

**Applications due:** 2/1/83
Faculty 24

**Teaching Assistantship (18)**
5500—6000 9 15 Research

**DEPARTMENT OF MATHEMATICS**

**Applications due:** 2/15/83
Faculty 24

**Teaching Assistantship (6)**
8400—11400 9 4400 6c Help sessions

**Duke University, Durham 27706**

**Teaching Assistantship (10)**
10400 9 4400 6c Teaching

**Applications due:** 2/1/83
Faculty 24

**Teaching Assistantship (6)**
5500 9 682* 20 Grading, teaching
Research Assistantship (6)
5500 9 682* 20 Research

**North Carolina State University, Raleigh 27650**

**COMPUTER STUDIES PROGRAM**

**Applications due:** 2/1/83
Faculty 20; Published 20

**Wushow Chou, Director**

**Fellowship (2)**
7500 9 20 Grading, teaching
Teaching Assistantship (30)
5500 9 682* 20 Grading, teaching
Research Assistantship (6)
5500 9 682* 20 Research

**North Carolina State University, Raleigh 27650**

**Computer Studies Program**

**Applications due:** 2/1/83
Faculty 20; Published 20

**Wushow Chou, Director**

**Fellowship (2)**
7500 9 20 Grading, teaching
Teaching Assistantship (30)
5500 9 682* 20 Grading, teaching
Research Assistantship (6)
5500 9 682* 20 Research

*In-state tuition for year.

**DEPARTMENT OF MATHEMATICS**

**Applications due:** 6/1/83
Faculty 72; Published 45

**E. E. Burniston, Chairman**

**Teaching Assistantship (65)**
6000—6600 9 682 15-20 Teaching
Research Assistantship (2)
6200—7000 12 682 15-20 Research

**Ph.D. (79/82) OR 1, AM 1. Total: 2**

**NORTH CAROLINA**

**Applications due:** 3/1/83
Faculty 17; Published 15

**DEGREES AWARDED**

**Bachelor’s by inst.**

**Bachelor's by dept.**

**Master's by dept.**

**1485**
**104**
**23**

**2100**
**20**
**12**

**Ph.D. (79/82) CS 6. Total: 6**

**Ph.D. (79/82) ANT 3, AFA 9, GT 6. Total: 18**

**Ph.D. (79/82) AN 1, AFA 2, AM 1, Other 1. Total: 5**

**Ph.D. (79/82) AFA 4, L 1, S 1, Other 1. Total: 7**

**Ph.D. (79/82) AFA 3, L 2, P 1, AM 3. Total: 12**

**Bachelor’s by inst.**

**Bachelor's by dept.**

**Master's by dept.**

**1512**
**18**
**7**

**1093**
**22**
**6**

**2001**
**52**

**Bachelor’s by inst.**

**Bachelor's by dept.**

**Master's by dept.**

**2644**
**87**
**6**

**2644**
**15**
**6**

**Total: 2**

758
GRADUATE STUDY IN MATHEMATICS AT DUKE

The Department of Mathematics of Duke University offers courses and thesis direction leading to the degrees of Master of Arts, Master of Science, Master of Science in Statistics and Computing, and Doctor of Philosophy. The Department and University offer fellowships, teaching assistantships, and research assistantships. There are 24 graduate faculty members representing many areas of mathematics, especially nonlinear partial differential equations. Excellent library facilities as well as office space are available in the mathematics building. For further information write to:

Professor William K. Allard
Director of Graduate Studies, Department of Mathematics
Duke University
Durham, North Carolina 27706

UNIVERSITY OF NORTH CAROLINA

The Department of Mathematics offers programs leading to the degrees Master of Arts, Master of Science, and Doctor of Philosophy. 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. Financial assistance is available and can be obtained by writing to address below.

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, and several complex variables.

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

Equal Opportunity/Affirmative Action Employer
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<th>TYPE OF ASSISTANCE</th>
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<th>SERVICE REQUIRED</th>
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<td>University of North Carolina at Greensboro 27412</td>
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<td>Wake Forest University, Winston-Salem 27109</td>
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<td>Leonard Shapiro, Chairman</td>
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<td>Case Western Reserve University, Cleveland 44106</td>
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<td>DEPARTMENT OF BIOMETRY</td>
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<td>H. B. Houser, Chairman</td>
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**NORTH DAKOTA**

**OHIO**
CASE WESTERN RESERVE UNIVERSITY

The Department of Mathematics and Statistics offers M.S. and Ph.D. degree programs in both mathematics and statistics. Currently, the faculty is quite strong in probability theory and in system and control theory as well as in more traditional areas of mathematics. The Department also offers a master's degree program in applied statistics. Financial aid in the form of teaching and research assistantships is available. For more information, please write to:

Chairman, Graduate Committee
Department of Mathematics and Statistics
Case Western Reserve University
Cleveland, Ohio 44106

DEPARTMENT OF MATHEMATICS
AND STATISTICS

W. A. Woyczynski, Chairman

Applicants due: 3/1/83
Faculty 25; Published 21

Bachelor's by Inst. 618
Ph.D. (79/82) ANT 1, AFA 1,

Master's by dept. 23
GT 1, P 1, S 3. Total: 7

*Plus tuition.

DEPARTMENT OF OPERATIONS RESEARCH
Burton V. Dean, Chairman

Applications due: 4/1/83
Faculty 12; Published 12

Bachelor's by Inst. 618
Ph.D. (79/82) OR 15. Total: 15

Cleveland State University, Cleveland 44115

DEPARTMENT OF MATHEMATICS

Thomas W. Hungerford, Chairman

Applications due: 9/1/83
Faculty 27; Published 15

Bachelor's by Inst. 2600
Bachelor's by dept. 15

Master's by dept. 6

John Carroll University, Cleveland 44118

DEPARTMENT OF MATHEMATICS

R. J. Koliar, Chairman

Applications due: 3/15/83*
Faculty 10; Published 1

Bachelor's by Inst. 549
Bachelor's by dept. 8

Master's by dept. 1

Kent State University, Kent 44242

DEPARTMENT OF MATHEMATICAL SCIENCES

O. P. Stackelberg, Chairman

Applications due: 3/1/83
Faculty 32; Published 21

Bachelor's by Inst. 2110
Bachelor's by dept. 36

Master's by dept. 3

University Fellow Stipend (1) 4000 300
Ph.D. (79/82) ANT 2, AFA 3,

Ph.D. (79/82) OR 15. Total: 7

Teaching Fellowship (8) 5600 9 300 4-6c Teaching

Miami University, Oxford 45056

DEPARTMENT OF MATHEMATICS AND STATISTICS

David J. Lutzer, Chair

Applications due: 3/15/83
Faculty 44; Published 24

Bachelor's by Inst. 3028
Bachelor's by dept. 44

Research Assistantship (5) 4900—5600 9 300 20 Research

Master's by dept. 8

Teaching Assistantship (24) 5000 9 420 18 Teaching or grading

Research Assistantship (1) 5000 9 420 20 Research

Summer Fellowship (25) 1000
Ohio State University, Columbus 43210
DEPARTMENT OF MATHEMATICS
Alan Woods, Chairman
Applications due: 2/1/83
Fellowship (20) 6500–8000 12
Teaching Assistantship (250) 5500–6500 9
Summer Fellowship (100) 1350 3

DEPARTMENT OF STATISTICS
J. S. Rustagi, Chairman
Applications due: 3/15/83
Teaching Assistantship (40) 5400–5850 9

Ohio University, Athens 45701
DEPARTMENT OF MATHEMATICS
D. O. Norris, Chairman
Applications due: 3/1/83
Teaching Fellowship (3) 7000–7500 12 360 15
Teaching Assistantship (35) 4300–6000 9–12 360 15

University of Akron, Akron 44325
DEPARTMENT OF MATHEMATICAL SCIENCES
William H. Beyer, Head
Applications due: 3/1/83
Teaching Assistantship (35) 3900–4500* 9 15-20 Teaching

*Subject to increase.

The Ohio State University
Department of Mathematics
231 West 18th Avenue
Columbus, Ohio 43210

FELLOWSHIPS
$6500/year, plus
$1350 Head Start
Summer Fellowship +
all Tuition and fees
Application Deadline
February 1, 1983

Ph.D. degrees are offered in many
fields including areas of Algebra,
Analysis, and Topology. Six to ten
students complete their Ph.D. degree
in theoretical mathematics each year.

M.S. degree programs at OSU involve
theoretical, applied and/or inter-
disciplinary mathematics, for example
Actuarial Science courses. One plan
combines Math with Computer and Info.
Science for two M.S. degrees.

M.A. degree programs for high school
teachers may be completed in summer
study only or with double TA support.

PLEASE CONTACT THE MATHEMATICS DEPARTMENT CHAIRMAN FOR FURTHER INFORMATION
University of Cincinnati, Cincinnati 45221
DEPARTMENT OF MATHEMATICAL SCIENCES
Herbert Halpern, Head
Fellowship (4) 5000–5500 9 216
Teaching Assistantship (33) 4600–5000 9 12 Teaching
Scholarship (8) 9 216

Applications due: 2/15/83
Faculty 37; Published 33
Bachelor's by inst. 3081
Bachelor's by dept. 32
Master's by dept. 9
Ph.D. (79/82) AFA 1, AM 1.
Total: 2

University of Dayton, Dayton 45469
DEPARTMENT OF MATHEMATICS
John McCloskey, Chairman
Teaching Assistantship (5) 4400–4600 9 6
Research Assistantship (3) 4400–4800 9 20

Applications due: 3/30/83
Faculty 13; Published 7
Bachelor's by inst. 1488
Bachelor's by dept. 15
Master's by dept. 3

University of Toledo, Toledo 43606
DEPARTMENT OF MATHEMATICS
Harvey Wolff, Chairman
Teaching Assistantship (20) 4800–5500 9 210 4-6 Teaching

Applications due: Open
Faculty 25; Published 14
Bachelor's by inst. 3072
Bachelor's by dept. 7
Master's by dept. 1

Wright State University, Dayton 45435
DEPARTMENT OF MATHEMATICS AND STATISTICS
Edgar A. Rutter, Chairman
Teaching Assistantship (6) 4000–4100 9 7/hr. 16**

Applications due: 4/1/83*
Faculty 30; Published 10
Bachelor's by inst. 2029
Bachelor's by dept. 6
Master's by dept. 3

*Late applications accepted.
**Teaching and/or tutoring in supplemental instruction program.

Youngstown State University, Youngstown 44555
DEPARTMENT OF MATHEMATICAL AND COMPUTER SCIENCES
Dean R. Brown, Chairman
Teaching Assistantship (3) 3750 9

Applications due: Open
Faculty 29; Published 8
Bachelor's by inst. 2247
Bachelor's by dept. 41
Master's by dept. 2

Teaching one course

OKLAHOMA

Oklahoma State University, Stillwater 74078
DEPARTMENT OF COMPUTING AND INFORMATION SCIENCES
Donald Fisher, Head
Fellowship (1) 5500 9 25/hr.
Teaching Assistantship (4) 5850 9 25/hr.

Applications due: 3/1/83
Faculty 9; Published 2
Bachelor's by inst. 3075
Bachelor's by dept. 40
Master's by dept. 9

OKLAHOMA STATE UNIVERSITY
DEPARTMENT OF MATHEMATICS
Be A Colleague of the O.S.U. Faculty
While You Grow Mathematically
If you choose to do your graduate work in mathematics at OSU, the mathematics faculty will do its best to help you attain your academic and professional goals. Our M.S., Ph.D., and Ed.D. programs are regularly being updated. The pure mathematics programs are supplemented and improved by the active research faculty while new and innovative applied mathematics degree programs are being designed with the cooperation of Industry.

For information on admission, financial support, and degree programs write:
Professor John Jobe
Graduate Director
Department of Mathematics
Oklahoma State University
Stillwater, Oklahoma 74078
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University of Oklahoma, Norman 73019

| Department of Mathematics, Bernard R. McDonald, Chairman | 5500–6500 | 9 | 23.50/hr, 6 Teaching, grading | Bachelor's by inst. 2362, Bachelor's by dept. 23, Master's by dept. 6 |
| Teaching Assistantship (35) | 5500–6500 | 9 | 250–1000 | Ph.D. (79/82) ANT 3, GT 2, ME 1. Total: 6 |

University of Tulsa, Tulsa 74104

| Department of Computer Science, Roger L. Wainwright, Chairman | 3600–4900 | Waived | 6 Teaching | Bachelor's by inst. 800, Bachelor's by dept. 27, Master's by dept. 8 |
| Scholarship (1) | 3600–4900 | Waived | 9 |

University of Oregon, Eugene 97403

| Department of Computer and Information Science, Arthur M. Farley, Chairman | 4420–5276 | 9 | 87/term | Bachelor's by inst. 1615, Bachelor's by dept. 39, Master's by dept. 11, PhD. (79/82) S 11, OR 1. Total: 12 |
| Teaching Fellowship (15) | 4420–5276 | 9 | 15 Teaching |
| Teaching Assistantship (3) | 4420–5276 | 9 | 15 Research |

Oregon State University, Corvallis 97331

| Department of Statistics, G. David Faulkenberry, Chairman | 4400 | 9 | 90/term | Bachelor's by inst. 2948, Bachelor's by dept. 13, Master's by dept. 12, PhD. (79/82) S 11, OR 1. Total: 12 |
| Teaching Assistantship (10) | 4400 | 9 | 12-15 |
| Research Assistantship (10) | 4400–8100 | 9-12 | 90/term | 12-20 |

PENNSYLVANIA

| Bucknell University, Lewisburg 17837 | 925 | 9 | 15 Grading, tutoring | Bachelor's by inst. 745, Bachelor's by dept. 32, Master's by dept. 1 |
| Fellowship (2) | 925 | 9 |
| Teaching Assistantship (5) | 5000 | 9 |
| Scholarship (3) | 5000 | 9 | 15 Grading, tutoring |
### TYPE OF ASSISTANCE

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<th>STIPEND</th>
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<th>SERVICE REQUIRED</th>
<th>DEGREES AWARDED</th>
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<td>hours type of service</td>
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<td></td>
<td>dollars months</td>
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<tr>
<td>Carnegie-Mellon University, Pittsburgh 15213</td>
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<tr>
<td>DEPARTMENT OF MATHEMATICS</td>
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<tr>
<td>George J. Fix, Head</td>
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<td>DEPARTMENT OF STATISTICS</td>
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<td>Stephen E. Fienberg, Head</td>
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<td>Fellowship (5)</td>
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<td>Drexel University, Philadelphia 19104</td>
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<td>DEPARTMENT OF MATHEMATICAL SCIENCES</td>
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<tr>
<td>Loren Argabright, Head</td>
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<tr>
<td>Teaching Assistantship (30)</td>
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</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:

Theodore W. Palmer, 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.

### CARNEGIE-MELLON UNIVERSITY

Department of Mathematics

ZEEV NEHARI INSTRUCTORSHIP

Professor Zeev Nehari was a member of this Department from 1954 to his death in 1978. The Zeev Nehari Instructorship in Mathematics, a postdoctoral position, has been instituted within this Department to honor his memory. Applicants are expected to show exceptional research promise as well as clear evidence of achievement. Each appointment is for two academic years, extendable for one further year when mutually agreeable. It carries a reduced academic year teaching load of six hours per week during one semester and three hours per week during the other. The applicant should have research interests which intersect those of current faculty of the Department. The stipend for the academic year 1983–84 will be $22,000.

Application forms and further information on the Instructorship and the Department can be obtained by writing to:

Professor Kenneth O. Kortanek, Chairman
Zeev Nehari Instructorship Committee — Department of Mathematics
Carnegie-Mellon University — Pittsburgh, Pennsylvania 15213

To ensure consideration, applications should be filed by February 1, 1983.

Carnegie-Mellon University is an Equal Opportunity/Affirmative Action Employer.
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<tr>
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<tr>
<td>James C. Reber, Chairman</td>
<td>Faculty 36</td>
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<td><strong>Lehigh University, Bethlehem 18015</strong></td>
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<td>B. K. Ghosh, Chairman</td>
<td>Faculty 26; Published 23</td>
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<tr>
<td><strong>Pennsylvania State University, University Park 16802</strong></td>
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<td>DEPARTMENT OF COMPUTER SCIENCE</td>
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<tr>
<td>Joseph M. Lambert, Head</td>
<td>Faculty 21; Published 20</td>
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<td>Fellowship (2)</td>
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<tr>
<td>Gerard Lallement, Chairman</td>
<td>Faculty 46; Published 42</td>
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<tr>
<td>William L. Harkness, Head</td>
<td>Faculty 12; Published 10</td>
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<td><strong>Shippensburg State College, Shippensburg 17257</strong></td>
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<td>DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE</td>
<td>Applications due: Open</td>
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<tr>
<td>James L. Sieber, Chairman</td>
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<td><strong>Temple University, Philadelphia 19122</strong></td>
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<tr>
<td>Louis Raymon, Chairman</td>
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<tr>
<td>Scholarship (1-2)</td>
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**DREXEL UNIVERSITY**

The Department of Mathematical Sciences offers graduate programs leading to the M.S. and Ph.D. degrees. The M.S. degree is available under two basic options, Applied Mathematics and Computer Science/Computational Mathematics. Both programs are "professionally oriented" in the sense that they are primarily intended to prepare students for employment as practicing applied mathematicians and computer specialists in business, industry, or government. The Ph.D. program is primarily concentrated in the areas of analysis, applied mathematics, and computational mathematics. Financial aid is available through teaching and research assistantships which provide academic year stipends of from $4500 to $5500 plus a waiver of tuition and fees. Applicants may request further information from:

Graduate Recruiting Chairman
Department of Mathematical Sciences
Drexel University
Philadelphia, Pennsylvania 19104
<table>
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<tr>
<th>University of Pennsylvania, Philadelphia 19104</th>
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<tr>
<td>DEPARTMENT OF MATHEMATICS</td>
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<tr>
<td>Chung-Tao Yang, Chairman</td>
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<tr>
<td>Fellowship (1)</td>
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<tr>
<td>5300* 9  **</td>
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<tr>
<td>Teaching Assistantship (35)</td>
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<td>5200* 9  270** 10-15</td>
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<td>*1982–83 figures; may increase for 1983–84.</td>
</tr>
<tr>
<td>**This amount may be increased for 1983–84.</td>
</tr>
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<td>THE WHARTON SCHOOL, DEPARTMENT OF STATISTICS</td>
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<tr>
<td>Donald F. Morrison, Chairman</td>
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<tr>
<td>Teaching Fellowship (12)</td>
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<tr>
<td>4800 9  **</td>
</tr>
<tr>
<td>*Late applications considered.</td>
</tr>
<tr>
<td>**Tuition: $3915 per semester (4 courses or more); general fee: $250 per year; health fee: $150. There is no health fee for students paying full tuition (8 or more courses per year).</td>
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<th>University of Pittsburgh, Pittsburgh 15260</th>
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<td>W. E. Deskins, Chairman</td>
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<td>5500–8250 8-12 15-20 Teaching</td>
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<td>Don Goelman, Director</td>
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<td>Frederick W. Hartmann, Chairperson</td>
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<td>*3 hours per week, teaching; 7 hours per week, preparing; 10 hours per week, tutoring.</td>
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<tr>
<td>*3 hours per week, teaching; 7 hours per week, preparing; 10 hours per week, tutoring.</td>
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<td>Programming (4)</td>
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* $25 per hour (6-9 hours).

**SOUTH CAROLINA**

*Clemson University, Clemson 29631*

**DEPARTMENT OF MATHEMATICAL SCIENCES**

Faculty 46; Published 25

| Teaching Assistantship (16) | 5400 | 9 | 3-6 Teaching hours | Bachelor's by Inst. 1833 |
| Research Assistantship (4) | 5400 | 9 | 20 Research | Bachelor's by dept. 38 |
| Programming (4) | 7350–7800 | 12 | 25/hr. | Master's by dept. 29 |

* $25 per hour (6-9 hours).

**University of South Carolina, Columbia 29028**

**DEPARTMENT OF MATHEMATICS AND STATISTICS**

Applications due: 3/31/83

Faculty 41; Published 35

| Teaching Assistantship (35) | 5000–6000 | 9 | 300 | 5 Teaching | Bachelor's by Inst. 3219 |
| Research Assistantship (1) | 5000–6000 | 9 | 300 | 15-20 Research | Bachelor's by dept. 12 |
| Other (2) | 4500 | 9 | 300 | 15-20 Grading | Master's by dept. 13 |
| Summer Support (25) | 1200–1600 | 6wks. | 37.50/term | Ph.D. (79/82) ANT 1, S 2, Other 3. Total: 6 |

**SOUTH DAKOTA**

*South Dakota School of Mines and Technology, Rapid City 57701*

**DEPARTMENT OF MATHEMATICAL SCIENCES**

Applications due: 3/15/83

Faculty 14; Published 9

| Teaching Assistantship (10) | 3600–4000 | 9 | 13.36/hr. | Bachelor's by Inst. 247 |

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

Ph.D. students in Mathematics may specialize in numerous areas, including algebra, analysis, applied mathematics, discrete mathematics, logic, number theory, probability and topology. Students in Statistics may choose programs in probability theory, applied probability, statistical computing, mathematical statistics, and applied statistics.

The broad spectrum of advanced study is supported by excellent library holdings, a departmental reading room with current journals and computing facilities.

**FINANCIAL AID**

The primary source of financial aid is the graduate assistantship. The Department offers teaching assistantships, teaching apprenticeships, grading assistantships, and service assistantships with the statistics laboratory. Full-time teaching assistantships typically require 5 contact hours per week and carry a stipend of $5000 to $6000 for the academic year. In addition, graduate assistants receive a substantial reduction in tuition and fees. Summer stipends range from $900 to $1600, for those who desire summer support.

For further information and application materials, contact the Director of Graduate Studies, Department of Mathematics and Statistics, University of South Carolina, Columbia, South Carolina 29208.
University of South Dakota, Vermillion 57069
DEPARTMENT OF MATHEMATICAL SCIENCES
William J. Kabelseman, Chairman
Applications due: 4/1/83
Teaching Assistantship (6) 2950 9 13.36/cr.hr. 4 Teaching

TENNESSEE

Middle Tennessee State University, Murfreesboro 37132
DEPARTMENT OF MATHEMATICS AND
COMPUTER SCIENCE
Harold Spraker, Chairman
Applications due: 4/1/83
Teaching Assistantship (14) 3800-4000 9 6

Tennessee Technological University, Cookeville 38501
DEPARTMENT OF MATHEMATICS AND
COMPUTER SCIENCE
Edmond Dale Dixon, Chairman
Applications due: Open
Teaching Assistantship (8) 4200 9 6

University of Tennessee, Knoxville 37996
DEPARTMENT OF MATHEMATICS
John S. Bradley, Head
Applications due: 3/1/83
Fellowship (1) 4000 10 6
Teaching Fellowship (2 or 3) 6600 9 6 6
Teaching Assistantship (56) 4734 9 6-8 6

UNIVERSITY OF TENNESSEE, KNOXVILLE
GRADUATE STUDY IN APPLIED AND PURE MATHEMATICS

PROGRAMS OF STUDY. The Department of Mathematics offers M.A., M.S., M.M., and Ph.D. degrees in a wide variety of areas. Broadly based programs are encouraged. Thesis and non-thesis options are available to M.A. and M.S. candidates. The Department is energetically engaged in research. Currently, it has 44 faculty and regularly hosts visiting faculty. Major fields of research include algebra and number theory, analysis (classical, functional, harmonic), applied mathematics, mathematical ecology, matrix theory, numerical analysis (linear algebra, ordinary and partial differential equations), integral, ordinary and partial differential equations, probability and statistics, geometric topology, transformation groups, and topological algebra. Faculty and students are currently engaged in joint work in computer science, ecology, economics, education, electrical engineering, engineering mechanics, nuclear engineering, and physics. The Department maintains close contact with the Oak Ridge National Laboratory and the Tennessee Valley Authority.

FINANCIAL AID. The department is offering to two or three outstanding candidates the Dryzer Teaching Fellowship, which carries a stipend of $6,600 for the academic year, tuition remission, and a reduced teaching load. Regular Teaching Assistantship support, ranging from $4,734 to $5,900 plus tuition remission, is available to qualified students. The value of tuition remission is $1,212 for in-state students and $3,560 for out-of-state students. Most Teaching Assistants who wish to do so are able to teach a course during the summer for an additional stipend of $880. Other support, in the form of Research Assistantships through departmental grants or from the Oak Ridge National Laboratory, is also available.

ENVIRONMENT. The University of Tennessee, Knoxville, is located along the Tennessee River with the Cumberland Mountains to the north, the Cumberland Plateau to the west and southwest, and the Great Smoky Mountains to the east and southeast. Many lakes, national forests and wilderness areas are nearby. Places to fish, water ski, canoe, sail, hike, rock climb, backpack, camp, and go caving or whitewater rafting are numerous. Snow skiing is available at several sites within three hours driving time. University-affiliated clubs participate in many of these activities.

The population of the city of Knoxville is 183,139; the metropolitan area contains a population of 476,517. For January the average low temperature is 32°F. For July the average low is 68°F and the average high is 88°F. University housing on or near campus is available for both single and married students. Bus service is available.

FOR INFORMATION, write to:
Dr. John S. Bradley, Head
Department of Mathematics
University of Tennessee
Knoxville, Tennessee 37996-1300
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<tr>
<th>TYPE OF ASSISTANCE</th>
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<th>DEGREES AWARDED</th>
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<td>Vanderbilt University, Nashville 37235</td>
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<td>Bachelor's by inst. 1217</td>
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<td>Patrick C. Fischer, Chairman</td>
<td>Faculty 10; Published 8</td>
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<td>4950-6000 9</td>
<td>Master's by dept. 6</td>
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<td>Teaching Fellowship (1)</td>
<td>6400-6900 9</td>
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<td>Research Assistantship (4)</td>
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<td>Scholarship (4)</td>
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<td>DEPARTMENT OF MATHEMATICS</td>
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<td>Bachelor's by Inst. 1217</td>
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<tr>
<td>Richard R. Goldberg, Chairman</td>
<td>Faculty 26; Published 20</td>
<td>Bachelor's by dept. 89</td>
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<td>Teaching Fellowship (20)</td>
<td>5300* 9 Waived 6c</td>
<td>Master's by dept. 4</td>
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<td>Vanderbilt Teaching Fellowship (2)</td>
<td>6000-6800* 9 Waived 6c</td>
<td>Ph.D. (79/82) ANT 2, AFA 3, GT 1, AM 1. Total: 7</td>
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<td>*1982-83 figures.</td>
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**TEXAS**

| ANGELO STATE UNIVERSITY, SAN ANGELO 76909 | Departments of Mathematics | Bachelor's by inst. 624 |
| Johnny M. Bailey, Head | Faculty 11 | Bachelor's by dept. 6 |
| Scholarship (15) | 500-3000 9 | Master's by dept. 1 |
| Student Aide (6) | 1092-2184 9 | |
| *Resident: $164; nonresident: $474. | | |

| BAYLOR UNIVERSITY, WACO 76798 | Departments of Mathematics | Bachelor's by Inst. 1634 |
| Howard L. Rolf, Chairman | Faculty 17; Published 8 | Bachelor's by dept. 15 |
| Teaching Assistantship (5) | 4000-4500 9 | |
| Tutoring 3c | Teaching | |

| EAST TEXAS STATE UNIVERSITY, COMMERCE 75428 | Departments of Mathematics | Bachelor's by inst. 1053 |
| Dale R. Bedgood, Head | Faculty 13; Published 4 | Bachelor's by dept. 39 |
| Teaching Assistantship (14) | 4800 9 160-197 6 | Master's by dept. 12 |

| MIDWESTERN STATE UNIVERSITY, WICHITA FALLS 76308 | Departments of Mathematical Sciences | Bachelor's by inst. 980 |
| Louie C. Huffman, Director | Faculty 15; Published 4 | Bachelor's by dept. 10 |
| Teaching Assistantship (6) | 5000 9 130-160 6c | |

| NORTH TEXAS STATE UNIVERSITY, DENTON 76203 | Departments of Mathematics | Bachelor's by inst. 1953 |
| John Ed Allen, Chairman | Faculty 20; Published 15 | Bachelor's by dept. 10 |
| Teaching Fellowship (36) | 5500-7000 9 338 6c Teaching | Master's by dept. 10 |
| Ph.D. (79/82) AFA 2, AM 2. Total: 4 | | |

| SOUTHERN METHODIST UNIVERSITY, DALLAS 75275 | Departments of Computer Science | Bachelor's by inst. 130 |
| AND ENGINEERING | J. Kennington, Acting Chairman | Bachelor's by dept. 20 |
| Teaching Assistantship (12) | 400/mo.- 500/mo. 9 20 | Master's by dept. 13 |
| Research Assistantship (2) | 400/mo.- 500/mo. 9 20 | Ph.D. (79/82) CS 9. Total: 9 |
| DEPARTMENT OF MATHEMATICS | Applications due: 4/1/83 | Bachelor's by inst. 130 |
| George W. Reddien, Chairman | Faculty 19; Published 10 | Bachelor's by dept. 13 |
| Teaching Fellowship (12) | 5000-6500 9 10 Teaching | Master's by dept. 5 |
| Ph.D. (79/82) AM 2. Total: 2 | | |

**DEGREES AWARDED**

| 1981-1982 | Bachelor's by inst. 1217 |
| Bachelor's by dept. 16 |
| Master's by dept. 6 |
| Ph.D. (79/82) CS 4. Total: 4 |
| Bachelor's by Inst. 1217 |
| Bachelor's by dept. 89 |
| Master's by dept. 4 |
| Ph.D. (79/82) ANT 2, AFA 3, GT 1, AM 1. Total: 7 |
| Bachelor's by inst. 624 |
| Bachelor's by dept. 6 |
| Master's by dept. 1 |
| Bachelor's by Inst. 1634 |
| Bachelor's by dept. 15 |
| Bachelor's by inst. 1053 |
| Bachelor's by dept. 39 |
| Master's by dept. 12 |
| Bachelor's by inst. 980 |
| Bachelor's by dept. 10 |
| Bachelor's by inst. 1953 |
| Bachelor's by dept. 10 |
| Master's by dept. 10 |
| Ph.D. (79/82) AFA 2, AM 2. Total: 4 |
| Bachelor's by inst. 130 |
| Bachelor's by dept. 20 |
| Master's by dept. 13 |
| Ph.D. (79/82) CS 9. Total: 9 |
| Bachelor's by inst. 130 |
| Bachelor's by dept. 13 |
| Master's by dept. 5 |
| Ph.D. (79/82) AM 2. Total: 2 |
The University: North Texas State University is located in Denton, Texas, a city of 50,000 residents just 35 miles north of the Dallas-Fort Worth metroplex and about 25 miles north of the D/FW 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 18,500 students with nearly one-third of these engaged in graduate study.

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 572 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 method of learning and doing mathematics used by Professors R. L. Moore and H. S. Wall of the University of Texas. This method is widely used by our faculty along with a variety of other techniques which enable the student to have excellent research and educational training in mathematics. The department has 20 faculty members and 36 teaching fellow positions.

Professor Gian-Carlo Rota of MIT has been our guest as Visiting Lecturer for December of 1980 and 1981. Also we have been fortunate to have as our guests in recent years S. Kakutani, Stan Ulam, Paul Erdos, W. Zelazko, D. Cenzer, S. Graf, and others.

Financial Assistance: The regular teaching fellow stipends are $5000 for students with a Baccalaureate degree and $5488 for those with a master's degree in mathematics. Teaching fellows teach two three-hour classes of 30-40 students each semester. Out-of-state fees are waived for teaching fellows and spouses. Teaching fellows may earn an additional $250 per semester by working in the Tutor Lab.

Special Awards: The Department is able to award three special teaching fellowships named in honor of Professor E. H. Hanson. These awards will be made to outstanding mathematics students and will pay $600 more than the regular teaching fellowships.


For information contact John Ed Allen, Chairman, Department of Mathematics, North Texas State University, Denton, Texas 76203. Telephone 817-565-2155.

EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER
Stephen F. Austin State University, Nacogdoches 75962
DEPARTMENT OF MATHEMATICS AND STATISTICS
Thomas A. Atchison, Chairman
Applications due: 4/83; Faculty 23; Published 5
Teaching Assistantship (10) 4725–5200 9 308 6 Teaching

Texas A&M University, Kingsville 78363
DEPARTMENT OF MATHEMATICS
David R. Cecil, Chairman
Applications due: 4/15/83; Faculty 15; Published 8
Teaching Assistantship (8) 5112 9 328 6 Teaching

Texas A&M University, College Station 77843
INSTITUTE OF STATISTICS
W. B. Smith, Director
Applications due: 4/8/83; Faculty 18; Published 18
Fellowship (1) 5400 9 200 Teaching
Teaching Assistantship (14) 5400–6410 9 200 Research
Graduate Assistantship Nonteaching (8) 5400–6410 9 200 20 Teaching related

Texas Tech University, Lubbock 79409
DEPARTMENT OF MATHEMATICS
John T. White, Chairman
Applications due: 4/1/83; Faculty 48; Published 40
Teaching Fellowship (2) 6600–7600 9* 100 6 Teaching
Teaching Assistantship (47) 6000–7000 9* 100 6 Teaching
Research Assistantship (3) 6000–7000 9* 100 20 Research
*Summer support is anticipated at the same rate.

University of Houston—Central Campus, Houston 77004
DEPARTMENT OF MATHEMATICS
Garret J. Etgen, Chairman
Applications due: 3/1/83*; Faculty 41; Published 34
Teaching Fellowship (40) 4800–6250 9 ** 6 Teaching
Teaching Assistantship (15) 4550–4920 9 ** 6 Teaching
*Late applications considered if funds are available.
**Based on 12 hours; Resident—$50 tuition, $150 fees per semester; nonresident—$480 tuition, $150 fees per semester.

University of Texas at Austin 78712
DEPARTMENT OF COMPUTER SCIENCES
A. G. Dale, Chairman
Applications due: 2/1/83; Faculty 33; Published 33
Fellowship (8) Variable 9 10-20 Teaching, grading
Teaching Assistantship (30) 600/mo.— 9 10-20 Teaching, grading
Research Assistantship (45) 525/mo.— 12 20 Research
Ph.D. (79/82) CS 28. Total: 28

Texas Tech University
M. A., M. S., and Ph.D. in Mathematics and Statistics
M. S. in Mathematics with Computer Science Emphasis
47 Teaching Assistantships $6000–$7000
3 Research Assistantships $6000–$7000
2 Teaching Fellows $6600–$7600

Summer support generally available
All fees and out-of-state tuition waived (approximate cost to student is $50 per semester)

Apply to:
Dr. M. J. Strauss, Department of Mathematics
Texas Tech University, Lubbock, Texas 79409
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<td>of service</td>
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DEPARTMENT OF MATHEMATICS
James W. Daniel, Chair
Teaching Fellowship (2) 7500 9 500  
Teaching Assistantship (65) 4500–7200 9 500  
Scholarship (2) 1000 9 500–1500  
*Half the duties of teaching assistant.  
**Recitation sections and related duties.

University of Texas at El Paso 79968
DEPARTMENT OF MATHEMATICAL SCIENCES
Joe A. Guthrie, Chairman
Teaching Assistantship (12) 5200–6000 9 170 18 6c
Instructorship (5) 6000–7500 9 170 18

UTAH
Brigham Young University, Provo 84602
DEPARTMENT OF STATISTICS
Alvin C. Rencher, Chairman
Teaching Assistantship (12) 7000–8000 12 2000 20
Research Assistantship (5) 7000–8000 12 2000 20

University of Utah, Salt Lake City 84112
DEPARTMENT OF MATHEMATICS
Frank C. Hoppensteadt, Chairman
Teaching Fellowship (7) 9000 9 Waived 20
Teaching Assistantship (7) 8500 9 Waived 20

VERMONT
University of Vermont, Burlington 05405
STATISTICS PROGRAM
BIOSTATISTICS PROGRAM
David Sylwester, Director
Teaching Fellowship (3-5) 5500 9 150 18 Grading, help sessions
Research Assistantship (1-3) 7000–8500 9-12 2150 18 Research

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 $7,500 for nine months beginning in September, 1983; tuition is low but not 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

773
Type of Assistance | Stipend | Fees | Service Required | Degrees Awarded
--- | --- | --- | --- | ---
(Number anticipated 1983-1984) | paid to student dollars | paid by student ($) | hours per week of service | Academic year 1981-1982

**Virginia**

**College of William and Mary, Williamsburg 23185**

DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

William L. Bynum, Chairman

Teaching Assistantship (4) 4000 9 10 Grading, research
Research Assistantship (1) 4000 9 10 Research

**George Mason University, Fairfax 22030**

DEPARTMENT OF MATHEMATICAL SCIENCES

Richard Draper, Chairman

Applications due: Open Faculty 33; Published 20

Teaching Assistantship (3) 3400-4000 9 * 15 Grading

*In-state: $588 for 12 hours ($49 per credit hour); out-of-state: $1116 for 12 hours ($93 per credit hour).

**James Madison University, Harrisonburg 22807**

DEPARTMENT OF MATHEMATICAL SCIENCES

Diane M. Spresser, Head

Teaching Assistantship (7) 3600 9 6^C Teaching

**Old Dominion University, Norfolk 23508**

DEPARTMENT OF MATHEMATICAL SCIENCES

Philip Wohl, Graduate Program Director

Fellowship (2) 2500-4000 9
Teaching Assistantship (16) 5000-7000 9 20 Teaching, grading
Research Assistantship (2) 5000-7000 9 20 Research

Summer Teaching/Research (10) 2000

**University of Virginia, Charlottesville 22901**

DEPARTMENT OF APPLIED MATHEMATICS

James M. Ortega, Chairman

Teaching Fellowship (6-8) 6000-7000 9 10
Teaching Assistantship (8-10) 7000-8000 9 500-1500 20
Research Assistantship (15-20) 7000-8500 9 500-3500 20

*For initial round of offers.

**DEPARTMENT OF MATHEMATICS**

Loren D. Pitt, Chairman

Fellowship (9) 5500-6500 9
Teaching Fellowship (4) 6500-7500 9 3^C Teaching
Teaching Assistantship (32) 6500-7500 9 0-1350 6^C Teaching

---

**THE DEPARTMENT OF MATHEMATICAL SCIENCES**

**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, computer science, modeling, and applications (atmospheric sciences, oceanography, fluid and solid mechanics, ecosystem studies, 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 $7,000 per academic year.

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

GRADUATE PROGRAM DIRECTOR – Department of Mathematical Sciences

Old Dominion University – Norfolk, VA 23508
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<td>Virginia Commonwealth University, Medical College of Virginia, Richmond 23288</td>
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<td>S. James Kilpatrick, Jr., Chairman</td>
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<td>*Six contact hours or 16-20 hours per week consulting.</td>
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<td>Virginia Polytechnic Institute and State University, Blacksburg 24061</td>
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<td>Applications due: 5/1/83</td>
<td>Faculty 82; Published 46</td>
<td>Bachelor's by dept.</td>
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<td>Applications due: 1/31/83</td>
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<td>Klaus Hinkelmann, Head</td>
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<td>6030–6930 9 474/qtr. 20</td>
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<td>Central Washington University, Ellensburg 98926</td>
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<td>Bachelor's by dept.</td>
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<td>W. Frederick Cutlip, Chairman</td>
<td>Graduate Staff Assistantship (3)</td>
<td>4450–5000 9 1320</td>
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<td>Eastern Washington University, Cheney 99004</td>
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<td>DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE</td>
<td>Applications due: 3/1/83</td>
<td>Faculty 20; Published 4</td>
<td>Bachelor's by dept.</td>
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<td>R. H. Dalla, Chairman</td>
<td>Teaching Fellowship (2)</td>
<td>4450 9 1329 5c</td>
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<td>UNIVERSITY OF VIRGINIA</td>
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<td>The Department of Mathematics and the Department of Applied Mathematics and Computer Science offer Masters and Ph.D. programs in Mathematics and Applied Mathematics. There are particular strengths in algebra, analysis, numerical analysis, scientific computing, and topology which support research activity in a broad range of fields. These include—</td>
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<td>continuum mechanics, numerical analysis, shell theory, control theory, dynamics of galaxies, computational solid and fluid mechanics, mathematical physics, statistics, probability and stochastic models, stochastic processes, ergodic theory, function theory, harmonic analysis, operator theory, special functions, commutative algebra, finite and algebraic groups, coding theory, Jordan and Lie algebras, algebraic K-theory, algebraic topology, and topology of manifolds.</td>
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<td>A variety of financial aid arrangements are available including fellowships, research assistantships, and teaching assistantships.</td>
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<td>For information write —</td>
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<td>DEPARTMENT OF MATHEMATICS</td>
<td>DEPARTMENT OF APPLIED MATHEMATICS AND COMPUTER SCIENCE</td>
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<td>CHARLOTTESVILLE, VIRGINIA 22903</td>
<td>CHARLOTTESVILLE, VIRGINIA 22901</td>
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775
University of Washington, Seattle 98195

DEPARTMENT OF BIOSTATISTICS,*

BIOMATHEMATICS GROUP

Richard Kronmal, Chairman, Biomathematics Group

Applications due:**

Faculty 40; Published 40

Bachelor's by inst. 5639

Master's by dept. 8

Ph.D. (79/82) S 10. Total: 10

Fellowship (17)

420/mo.

Teaching Assistantship (4)

832/mo. -- 885/mo.

1701 20

Research Assistantship (19)

810/mo. -- 867/mo.

1701 20

*The Biomathematics Group grants the degrees in the Department of Biostatistics.

**April for best chance of receiving support.

DEPARTMENT OF MATHEMATICS

R. Gangolli, Chairman

Applications due: 2/15/83

Faculty 61; Published 5

Bachelor's by inst. 5639

Bachelor's by dept. 100

Master's by dept. 10

Ph.D. (79/82) AFA 9, GT 4, L 1, P 1, OR 1, Other 4. Total: 20

Teaching Fellowship (1)

9088 12 2093 10 Teaching

Teaching Assistantship (71)

7074--7488 9 1701 20* Teaching

Research Assistantship (6)

7290--7794 9 1701 Research

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

DEPARTMENT OF STATISTICS

Michael D. Perlman, Chairman

Applications due: 1/1/83

Faculty 7; Published 5

Bachelor's by inst. 5000

Bachelor's by dept. 44

Master's by dept. 11

Ph.D. (79/82) CS 5. Total: 5

Teaching Assistantship (8)

7074 9 1701 20 Grading, teaching, research

Research Assistantship (8)

6930--7794 9 1701

Washington State University, Pullman 99164

DEPARTMENT OF COMPUTER SCIENCE

Narsingh Deo, Chairman

Applications due: 5/1/83

Faculty 11

Bachelor's by inst. 2060

Bachelor's by dept. 44

Master's by dept. 11

Ph.D. (79/82) CS 5. Total: 5

Fellowship (3)

5500*

Teaching Assistantship (23)

7100--7500* 9 1702/yr. 20 Teaching

Research Assistantship (5)

6900--7300* 9 1702/yr. 20 Research

Scholarship (2)

1000* 1176/yr.*

*These figures are 1982--83; no estimate is available for next year.

DEPARTMENT OF MATHEMATICS

James A. Cochran, Chairman

Applications due: 2/83

Faculty 31; Published 25

Bachelor's by inst. 2060

Bachelor's by dept. 14

Master's by dept. 8

Ph.D. (79/82) ANT 2, AFA 1, GT 1, OR 1, AM 3. Total: 8

Teaching Assistantship (29)

7100--7500 9 1700 20 Teaching

Research Assistantship (1)

8433--8900 12 1700 20 Research

Western Washington University, Bellingham 98225

DEPARTMENT OF MATHEMATICS AND

COMPUTER SCIENCE

Richard Levin, Chairman

Applications due: 5/1/83

Faculty 24; Published 6

Bachelor's by inst. 2110

Bachelor's by dept. 70

Master's by dept. 3

Teaching Assistantship (4)

4500 9 1320 5 Teaching

West Virginia University, Morgantown 26506

DEPARTMENT OF MATHEMATICS

James Miller, Acting Chairman

Applications due: 3/1/83

Faculty 35; Published 20

Bachelor's by Inst. 2700

Bachelor's by dept. 8

Master's by dept. 4

Teaching Assistantship (20)

3546 9 80 fees 12 Teaching

DEPARTMENT OF STATISTICS AND

COMPUTER SCIENCE

Donald F. Butcher, Chair

Applications due: 3/1/83

Faculty 21; Published 16

Bachelor's by Inst. 2700

Bachelor's by dept. 43

Master's by dept. 18

Teaching Assistantship (9)

4500 9 25/sem. 14 Teaching

Research Assistantship (6)

4812--6000 9-12 25/sem. 20 Consulting, research

WEST VIRGINIA

776
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<td>University of Wisconsin—Madison 53706</td>
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<td>R. R. Meyer, Chairman</td>
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<td>Teaching Assistantship (110) 8000–9000 9 1100</td>
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<td>Research Assistantship (40) 7000–8000 9 1100</td>
<td>15-20 Research</td>
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<td>University of Wisconsin—Oshkosh 54901</td>
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<td>N. J. Kuenzi, Chairman</td>
<td>Research Assistantship (2) 4700 9 800</td>
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<td>Master's by dept. 3</td>
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<td>University of Wyoming, Laramie 82071</td>
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<td>Bachelor's by inst. 1183</td>
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<td>Faculty 11; Published 6</td>
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<td>Henry R. Bauer III, Chairman</td>
<td>Teaching Assistantship (5) 5575 9 18</td>
<td>Teaching</td>
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<td>Master's by dept. 2</td>
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<td>Research Assistantship (1) 5575 9 18</td>
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<td>K. I. Gross, Head</td>
<td>Teaching Assistantship (25) 5535–6900 9</td>
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<td>Queen's University, Kingston, Ontario K7L 3N6</td>
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<td>DEPARTMENT OF MATHEMATICS AND STATISTICS</td>
<td>Teaching Assistantship (22) 1885–7856 12 *</td>
<td>0-10 Grading, teaching, etc.</td>
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<td>Bachelor's by dept. 39</td>
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<tr>
<td>L. L. Campbell, Head</td>
<td>University Scholarship (13) 1507–8000 12</td>
<td>Research</td>
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<td>Master's by dept. 6</td>
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<td>OGS, NSERC, SSHRC, Commonwealth (8) 5700–10500 12</td>
<td>Research</td>
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<td>Ph.D. (79/82) ANT 2, AFA 1, GT 1, S 2. Total: 6</td>
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<td>Simon Fraser University, Burnaby, British Columbia V5A 1S6</td>
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<td>DEPARTMENT OF MATHEMATICS</td>
<td>Teaching Assistantship (110) 2945–3490 4</td>
<td>430/sem.</td>
<td>20 Grading, teaching</td>
<td>Bachelor's by dept. 32</td>
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<td>G. A. C. Graham, Chairman</td>
<td>Research Assistantship (6) 8400 12</td>
<td>430/sem.</td>
<td>20 Research</td>
<td>Master's by dept. 1</td>
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<td>Scholarship (2) 10000 12</td>
<td>430/sem.</td>
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<td>Ph.D. (79/82) L 2, AM 1, Other 3. Total: 6</td>
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**WISCONSIN**

**University of Wisconsin—Madison 53706**
DEPARTMENT OF COMPUTER SCIENCES
R. R. Meyer, Chairman
Fellowship (3) 7000–9000 12
Research Assistantship (4) 7352–8933 9-12 *
Fellowship (4) 7352–8933 9-12 *

**University of Wisconsin—Oshkosh 54901**
DEPARTMENT OF MATHEMATICS
N. J. Kuenzi, Chairman
Research Assistantship (2) 4700 9 800 20

**University of Wyoming, Laramie 82071**
DEPARTMENT OF COMPUTER SCIENCE
Henry R. Bauer III, Chairman
Teaching Assistantship (5) 5575 9 18
Research Assistantship (1) 5575 9 18

**DEPARTMENT OF MATHEMATICS**
K. I. Gross, Head
Teaching Assistantship (25) 5535–6900 9

**Wyoming**

**Canada**

**Queen's University, Kingston, Ontario K7L 3N6**
DEPARTMENT OF MATHEMATICS AND STATISTICS
L. L. Campbell, Head
Teaching Assistantship (22) 1885–7856 12 *
University Scholarship (13) 1507–8000 12

**OGS, NSERC, SSHRC, Commonwealth (8) 5700–10500 12**

*Fees:
- $103 per credit or $823 per semester.

**Simon Fraser University, Burnaby, British Columbia V5A 1S6**
DEPARTMENT OF MATHEMATICS
G. A. C. Graham, Chairman
Teaching Assistantship (110) 2945–3490 4
Research Assistantship (6) 8400 12
Scholarship (2) 10000 12

777
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<td>5000–9400 12</td>
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University of Alberta, Edmonton, Alberta T6G 2G1

Applications due: 2/1/83
Faculty 55; Published 45
Bachelor's by dept. 20
Master's by dept. 4
Ph.D. (79/82) AFA 1, AM 2. Total: 3

University of British Columbia, Vancouver, British Columbia V6T 1Y4

Applications due: 3/31/83
Faculty 69; Published 55
Bachelor's by inst. 3660
Bachelor's by dept. 25
Master's by dept. 9
Ph.D. (79/82) ANT 2, GT 1, AM 4. Total: 7

University of Manitoba, Winnipeg, Manitoba R3T 2N2

Applications due: 8/15/83
Faculty 36; Published 27
Bachelor's by dept. 87
Master's by dept. 11
Ph.D. (79/82) ANT 1, AFA 3, GT 3, S 3, AM 2. Total: 12

*Depends on hours and rate.
University of New Brunswick, Fredericton, New Brunswick E3B 5A3

DEPARTMENT OF COMPUTER SCIENCE

W. Dana Wasson, Director

Applications due: 4/1/83
Faculty 16; Published 8

Teaching Assistantship (15)*
Research Assistantship (8)*
Graduate Research Assistantship (7)*

2400 8 1000 8 8 8
3200 12 1000 Research Research
2800 8 1000 Research

*Students normally receive combinations of the above at a rate of $650 per month.

DEPARTMENT OF MATHEMATICS AND STATISTICS

G. Mason, Chairman

Applications due: 2/1/83
Faculty 24; Published 12

Research Assistantship (5)

8000—10000 12 6 Grading

*M.A. $1000; Ph. D. $1500.

University of Ottawa, Ottawa, Ontario K1N 9B4

DEPARTMENT OF MATHEMATICS

M. Déruaz, Chairman

Applications due: 2/1/83
Faculty 27; Published 18

Teaching Assistantship (6)
Scholarship (2)

5000—6500 12 966 10 1000—2000 12 966

University of Saskatchewan, Saskatoon, Saskatchewan S7N 0W0

DEPARTMENT OF MATHEMATICS

M. Marshall, Head

Applications due: 2/28/83
Faculty 27; Published 20

Teaching Fellowship (8)
Scholarship (4)

3900* 8 885 6**
6800* 8 885

*Plus up to $3,040 if research is continued throughout summer months.
**Teaching or equivalent.

University of Toronto, Toronto, Ontario M5S 1A1

DEPARTMENT OF MATHEMATICS

J. McCool, Chairman

Applications due: 4/15/83
Faculty 54; Published 45

NSERC Fellowship (3)
Ontario Graduate Scholarship (3)
Research Assistantship (3)
University Open Fellowship (5)

10500 *
6000 *
6000 *
5800 *

*Tuition is $1300 for Canadian residents, $5300 for visa students. Some tuition waivers are available.

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 55 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.

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Inquiries are invited and should be addressed to:

The University of Alberta, Edmonton, Alberta, Canada T6G 2G1
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**University of Victoria, Victoria, British Columbia V8W 2Y2**

DEPARTMENT OF MATHEMATICS

C. R. Miers, Chairman

Fellowship (2) 7400–10000 12 846

Teaching Assistantship (2) 5200 9 846 10 Teaching, grading

Research Assistantship (2) 7200 12 846 Research

Applications due: 2/18/83

Faculty 27; Published 20

Bachelor's by inst. 1352

Bachelor's by dept. 18

**University of Western Ontario, London, Ontario N6A 5B7**

DEPARTMENT OF MATHEMATICS

D. Borwein, Head

Applications due: 3/1/83

Faculty 22; Published 17

Bachelor's by inst. 4135

Bachelor's by dept. 69

Master's by dept. 1

Ph.D. (79/82) AFA 2, GT 2.

Total: 4

Teaching Assistantship (9) 5000–9500 12 * 10 Grading

*$1293 estimate. Tuition for visa students $6756 (estimate) but visa students with sufficiently high academic standing may receive bursaries to defray additional fees.

**University of Windsor, Windsor, Ontario N9B 3P4**

DEPARTMENT OF MATHEMATICS

D. J. Britten, Chairman

Applications due: 3/31/83

Faculty 23; Published 18

Bachelor's by inst. 1800

Bachelor's by dept. 44

Master's by dept. 14

Ph.D. (79/82) ANT 1, S 6, AM 3. Total: 10

Teaching Assistantship (20) 4400M.Sc. 9 10 Problem Session, grading

4800Ph.D. 9 10 Problem Session, grading

Research Assistantship (10) 1000–7000 12

Scholarship (5) 2500 12

NSERC (2) 10500 12

Ontario Graduate Scholarship (2) 6270 12

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**PROCEEDINGS OF THE CONFERENCE ON INTEGRATION, TOPOLOGY, AND GEOMETRY IN LINEAR SPACES**

edited by William H. Graves

This book contains survey articles contributed by speakers at a conference held at the University of North Carolina in Chapel Hill in the spring of 1979 and organized around contributions of the late B. J. Pettis to the development of measure and integration in linear spaces and the role of general linear spaces in measure-theoretic considerations. Topics covered include strict topologies in topological measure theory (by H. Collins), the Dunford-Pettis property (by J. Diestel), the Radon-Nikodym property (by R. Huff), the Orlicz-Pettis phenomenon (by N. Kalton), applications of measure and integration in linear spaces (by I. Kluvanek), and the role of the Pettis measurability property (by J. J. Uhl, Jr.). In addition to these survey articles which impart both a historical and a state-of-the-art flavor, the book contains several research articles devoted to topics as diverse as spectral theory (by N. Dunford) and weak and strong compactness in spaces of Pettis integrable functions (by J. Brooks and N. Dinculeanu).


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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.

**Alabama**

Univ of Alabama, Huntsville
Computer Science Ph.D.

**California**

Stanford Univ
Engineering-Economic Systems Ph.D.

Univ of California, Davis
Mathematics Ph.D.

Univ of Southern California
Computer Science Ph.D.

**Colorado**

Univ of Northern Colorado
Mathematics and Applied Statistics Ph.D.

**Florida**

Univ of Florida
Statistics Ph.D.

Univ of Miami, Coral Gables
Mathematics and Computer Science D.A.

**Georgia**

Univ of Georgia
Mathematics Ph.D.

Mathematics Education Ed.D.

**Hawaii**

Univ of Hawaii
Public Health Sciences, Biostatistics Ph.D.

**Illinois**

Illinois State Univ
Mathematics D.A.

Univ of Chicago
Mathematics Ph.D.

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

Univ of Illinois, Urbana
Mathematics Ph.D.

**Iowa**

Univ of Iowa
Computer Science Mathematics Ph.D.

**Massachusetts**

Boston Univ
Mathematics Ph.D.

**Michigan**

Michigan State Univ
Mathematics Ph.D.

Statistics and Probability Ph.D.

**Missouri**

St. Louis Univ
Mathematical Sciences Ph.D.

Univ of Missouri, Columbia
Statistics Ph.D.

Univ of Missouri, Rolla
Engineering Mechanics Ph.D.

**Montana**

Univ of Montana
Mathematical Sciences Ph.D.

**New York**

Adelphi Univ
Mathematics and Computer Science Ph.D.

Cornell Univ
Mathematics Ph.D.

New York Univ, Courant
Mathematics Ph.D.

State Univ of New York, at Binghamton
Mathematical Sciences Ph.D.

Syracuse Univ
Mathematics Ph.D.

**Ohio**

Ohio Univ
Mathematics Ph.D.

**Oklahoma**

Oklahoma State Univ
Mathematics Ed.D.

**Pennsylvania**

Carnegie-Mellon Univ
Mathematics D.A.

Pennsylvania State Univ
Mathematics D.Ed.

Temple Univ
Mathematics Ph.D.

**Texas**

North Texas State Univ
Mathematics Ed.D.

Univ of Texas, Austin
Mathematics Ph.D.

**Virginia**

Virginia Commonwealth Univ,
Medical Coll of Virginia
Biostatistics Ph.D.

Virginia Polytechnic Institute
and State Univ
Mathematics Ph.D.

**Washington**

Washington State Univ
Mathematics D.A.

**Wisconsin**

Univ of Wisconsin, Madison
Mathematics Ph.D.
Stipends for Study and Travel

Graduate Support

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American Indian Fellowships. A program for Native Americans enrolled in a graduate degree program in the fields of education, law, medicine and related fields; or undergraduate or graduate degree program in the fields of business administration, engineering or natural resources and related fields. Covers full cost of tuition and fees, plus book allowance, stipend and allowance for dependents. Write to Indian Fellowship Program, Room 2161, F.O.B. 6, Washington, D.C. 20202; or call 202-245-8840.

American Society for Engineering Education. ONR Graduate Fellowship Program. About 45 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, and physical oceanography. Applicants must be citizens or nationals of the U.S. (of any age) who will receive their baccalaureate degree in 1983, 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 $12,500 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 15 February 1983. Application materials are available from the American Society for Engineering Education (ASEE), Eleven Dupont Circle, Suite 200, Washington, D.C. 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 write to Associated Western Universities, Inc., 142 East 200 South, Suite 200, Salt Lake City, Utah 84111.

Battelle Memorial Institute, Pacific Northwest Laboratory. Mathematics efforts in support of a number of current Department of Energy programs include neutron transport and radiative transfer, plasma dynamics, electromagnetic theory, applied statistics, diffusion processes, two-phase fluid flow, stochastic processes, and economic modelling. A limited number of summer appointments are available to faculty members, graduate students, and undergraduates through the Northwest College and University Association for Science (NORCUS) Program. Inquiries should be directed to NORCUS Office, Joint Center for Graduate Study, 100 Sprout Road, Richland, Washington 99352. (509-375-3090)

California State Graduate Fellowships. The state offers fellowships of up to $5500 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 782
Commission, 1410 Fifth Street, Sacramento, California 95814. The application deadline for 1983-1984 awards is February 9, 1983.

Center for Naval Analyses. Summer Employment. CNA, operated under contract with the University of Rochester, 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. Information may be obtained from Mr. P. D. Moke, Employment Manager, Center for Naval Analyses, 2000 N. Beauregard Street, Alexandria, Virginia 22311.

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 $5,500 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 is January 15 for the following academic year. Detailed information about the program can be obtained by writing to the CIC Minorities Fellowships Program, 111 Kirkwood Hall, Indiana University, Bloomington, Indiana 47405.

Exxon Teaching Fellowships. Fellowships for doctoral study in engineering and related disciplines created to assist persons seeking college teaching careers. The fellowship pays tuition and fees, and provides a stipend through the university of $12,000 in the first year, $13,500 in the second, and $15,000 in the third. The applicant must be a U.S. citizen (or U.S. national or permanent resident), have a mastery of spoken and written English, and seek a career in college teaching. Participating universities set their own eligibility requirements and independently select their Exxon Teaching Fellows. Names of participating universities and the particular disciplines to be studied at them are available from Exxon Education Foundation, 111 West 49th Street, New York, New York 10020.

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 William H. Stoddard, General Electric Foundation, Fairfield, Connecticut 06431.

Georgia Institute of Technology. President's Fellowships. These stipends of $5,000 for twelve months, plus departmental supplements and waiver of all tuition and fees, are awarded to first-year Ph.D. students and exceptional Masters students by the Dean of Graduate Studies. The awards are highly competitive; selection is based on academic criteria and evidence of scholarship. No services to the Institute are required, but participants are expected to maintain high academic standing. Graduate Research/Teaching Assistantships. Part-time employment at the equivalent rates of $20,000 to $26,000 per 12 months, plus waiver of all tuition and fees. Appointments are based primarily on scholarship and ability to contribute to on-going 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 propulsion and fluid mechanics, write to the Director of Graduate Studies, Mechanical and Aerospace Engineering, Princeton University.

Fannie and John Hertz Foundation Fellowships. The stipend is $9,000 ($10,000 if married), plus cost-of-education allowance. 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; Massachusetts
Institute of Technology; Polytechnic Institute of New York; Princeton University; Rensselaer
Polytechnic Institute; Rice University; University of Rochester; Stanford University; Texas A&M
University; Vanderbilt University; 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.

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. Write to the Corporate Fellowship Office, Hughes Aircraft Company,
Culver City, California 90230.

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 February 22, for the 12-month award period beginning in
either September or the following January. For application materials write: Hubert H. Humphrey

Johns Hopkins University. Tuition scholarships and stipends are available to students seeking the
Sc.M. or Ph.D. in biostatistics. Applicants should have one year of biological, physical, or social
science in addition to preparation in mathematics. Address inquiries to Chairman, Department of
Biostatistics, School of Hygiene and Public Health, 615 North Wolfe Street, Baltimore, Maryland
21205.

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. Opportunity for graduate students working toward master's
and doctoral degrees in the physical, life, social, and environmental sciences, engineering, and
mathematics in DOE Research Laboratories, Energy Centers and Mining Centers. The annual
stipend payment, applicable for all levels, is $7,200, with allowances: $1,000 for spouse and child,
$1,500 for spouse and two or more children. U.S. citizenship is required. About twenty-five
appointments are awarded annually. Inquiries may be addressed to University Programs, Oak
Ridge Associated Universities, P.O. Box 117, Oak Ridge, Tennessee 37830.

Kenneth O. May Fellowship in the History of Mathematics. Awarded for graduate study in the
history of mathematics in the Institute for the History and Philosophy of Science and Technology,
University of Toronto. Candidates must have a comprehensive preparation in mathematics, a
good background in history or philosophy, and effective writing skills. The stipend is $6,500 plus
fees up to at least $2,500. Information and application forms may be obtained by writing to C.
V. Jones, Institute for the History and Philosophy of Science and Technology, University of
Toronto, Toronto M5S 1K7, Canada. Application deadline is March 1, 1983.

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 $6,900 for a 12-month tenure ($575 per month), regardless of
level of study. No dependency allowances. Education allowance paid to fellowship institution.
Application deadline November. Further information and application materials may be obtained
from the Fellowship Office, National Research Council, 2101 Constitution Avenue, N.W.,
Washington, D.C. 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, Alaskan Native (Eskimo or Aleut), Black, Mexican American/Chicano, Puerto Rican or native Pacific Islander. The stipend is $6,900 for 12-month tenures ($575 per month), regardless of level of study. No dependency allowances. Education allowance paid to fellowship institution. The deadline for applications is November. Application materials may be obtained from the Fellowship Office, National Research Council, 2101 Constitution Avenue, N.W., Washington, D.C. 20418.

**Office of Naval Research.** Supports research over a wide computer range of areas including mathematics, operations research, statistics and probability, and computer science. For information write: Mathematical Sciences Division, Office of Naval Research, Arlington, Virginia 22217.

**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 marital status. Applications from women are especially encouraged. Two types of awards are available: *Eloise Gerry Fellowship* ($2,000 to $8,000, not to be used for a degree program, deadline for applications and credentials December 1), and *Grants-in-Aid* ($750, 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., 9650 Rockville Pike, Bethesda, Maryland 20014. An individual may apply for only one of the two awards. Please indicate to which type of award your inquiry is addressed.

**Smithsonian Institution.** *Predoctoral Fellowships.* Appointments to students who have substantially completed formal course requirements for the doctorate or its equivalent, to conduct research for the dissertation. Offered annually in the history of mathematics, for a period from six months to one year. Approximately $10,500 stipend, plus research expense allowance and relocation allowance. The proposed project must be approved in advance by appointee’s advisor, conducted within Smithsonian facilities, and must be related to research and interests of the Institution. Deadline for application is January 15th yearly for the following academic year. Further information and application forms may be obtained from the Office of Fellowships and Grants, Smithsonian Institution, Room 3300, L’Enfant Plaza, Washington, D.C. 20560.

**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 Larry Mann, Head, Department of Mathematics and Statistics, University of Massachusetts, Amherst, Massachusetts 01003.

**Woodrow Wilson Women’s Studies Research Grants.** Grants of up to $1,000 are available for students at graduate schools in the United States who have completed all pre-dissertation requirements. These grants are designed to encourage original and significant research about women on such topics as the evolution of women’s role in society and particularly contemporary America, women in history, the education of women, the psychology of women, and women as seen in literature. Forms and further information are available from the Woodrow Wilson National Fellowship Foundation, Women’s Studies Program, Box 642, Princeton, New Jersey 08540. The deadline for receipt of applications is November 15.
Postdoctoral Support

Air Force Office of Scientific Research. Research Contracts and Grants. Mathematicians and
scientists in the computer or mathematical sciences are encouraged to submit proposals through
their organizations for research support. It would be helpful if proposals to be considered for
a given fiscal year, which begins on October 1, were submitted six months prior to that date.
Recipients of support are not required to be U.S. citizens. Research areas of interest include
physical mathematics, probability, statistics, numerical analysis, system science, control theory,
and computer science. Research proposals should be forwarded to the Director of Mathematical
and Information Sciences, Air Force Office of Scientific Research, Building 410, Bolling AFB,
Washington, D.C. 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.
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 February 18. For application materials and more specific
information on assignment possibilities write to Science, Engineering and Diplomacy Fellows
Program, AAAS, 1776 Massachusetts Avenue, N.W., Washington, D.C. 20036.

American Philosophical Society. Postdoctoral research grants averaging $1,000 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 in 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 Dr. Randolph S. Klein, 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 $550/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

American Society for Engineering Education. Navy- and DOE-ASEE Summer Faculty Research
Programs. Programs in science and engineering research at the laboratories and R&D centers of
the Navy and Department of Energy; for U.S. citizens who are faculty or research members of
institutions of higher education. Stipends will be $550/week, plus travel allowance. Application
deadline is February 1. For a program announcement write to American Society for Engineering

Argonne National Laboratory. Predoctoral, postdoctoral, and visiting scientist appointments in
mathematics and computer science with an emphasis on applied analysis, numerical mathematics,
automated program transformations, and automated theorem proving. Summer appointments
available at undergraduate through visiting scientist levels. Information: Paul Messina, Director,
Mathematics and Computer Science Division, Argonne National Laboratory, Argonne, Illinois
60439.

Australian Institute of Nuclear Science and Engineering. Research Fellowships. Fellowships are
intended for scientists and engineers who have qualifications equivalent to the Ph.D. Stipends
are in the range of $17,000 to $22,000 per year (Australian currency), and the Institute may
contribute to travel costs to and from Australia. A research project within the field of nuclear
science and engineering of interest to the Institute must be proposed in the nomination after
agreement between the candidate and the nominating organization. Further information can be
obtained from Executive Office, Australian Institute of Nuclear Science and Engineering, Private
Mail Bag, Post Office, Sutherland N.S.W. 2232, Australia. Candidates must be nominated
by an Australian university or the Australian Atomic Energy Commission. Closing dates are
February 28 and August 31 each year, and all nominations received after one closing date will be
considered together after the next closing date.
Brown University. Jacob David Tamarkin Assistant Professorships. Offered by Brown University to promising mathematicians. Appointments are for three years, with a competitive salary. Possibilities exist for additional summer support. Teaching load is six hours per week and consists of courses of more than routine interest. An applicant (regardless of age) should have completed the doctorate by July 1, 1983 and no earlier than 1981. In addition to a letter expressing interest in a Tamarkin Assistant Professorship, the applicant should have three letters of recommendation sent to the Department of Mathematics by January 1, 1983. For more information, applicants should write to the Executive Officer, Department of Mathematics, Brown University, Providence, Rhode Island 02912. Women and members of minority groups are encouraged to apply. 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 scientists in the fields of physical sciences, mathematical and information sciences, psychological sciences, arctic and earth sciences, natural sciences, and ocean science and technology. Office and laboratory space; stipend ranges from $16,000–$20,000 first year, and $17,000–$21,000 second year; $4,000 in research expenses also available each year, and access to Harvard/Radcliffe libraries and facilities are provided. Deadline for applications in the first week of October. Write or call for application and information to: Science Scholar Fellowship Program, The Bunting Institute of Radcliffe College, 10 Garden Street, Cambridge, Massachusetts 02138. Telephone 617-495-8212.

California Institute of Technology. Harry Bateman Research Instructorships. Offered by the Department of Mathematics at the California Institute of Technology. Normally open to men and women (of any age) who have just received their doctorate in mathematics. Appointments are for one year and are renewable for one additional year. The annual salary will be $23,000. Duties include teaching one course for the full academic year. Application deadline is January 1. Inquiries or requests for application forms should be addressed to Professor W.A.J. Luxemburg, Department of Mathematics 253-37, California Institute of Technology, Pasadena, California 91125. Affirmative Action Employer.

Carnegie-Mellon University. Zeev Nehari Instructorship in Mathematics. This Instructorship has been instituted in the Department of Mathematics of Carnegie-Mellon University to honor the memory of Professor Zeev Nehari, a member of the Department from 1954 to his death in 1978. Applicants are expected to show exceptional research promise as well as clear evidence of achievement. Each appointment is for two academic years, extendable for one further year when mutually agreeable. It carries a reduced academic year teaching load of six hours per week during one semester and three hours per week during the other. The applicant should have research interests which intersect those of current faculty of the Department. The stipend for the academic year 1983-1984 will be $22,000. Application forms and further information on the Instructorship and the Department can be obtained by writing to Professor Kenneth O. Kortanek, Chairman, Zeev Nehari Instructorship Committee, Department of Mathematics, Carnegie-Mellon University, Pittsburgh, Pennsylvania 15213. To ensure consideration, applications should be filed by February 1, 1983. Carnegie-Mellon University is an Equal Opportunity Employer.

Congressional Science Fellowship. Sponsored jointly by the AMS-MAA-SIAM in cooperation with the AAAS, the fellowship offers a stipend of $25,000 for one year spent working on the staff of a congressman, a congressional committee or in the congressional Office of Technology Assessment. The applicant should be at the postdoctoral level, have a broad scientific and technical background, and have a strong interest in the uses of the mathematical and other sciences in the solution of societal problems. Further information on the general program can be obtained from AAAS Congressional Science Fellow Program, 1776 Massachusetts Avenue, N.W., Washington, D.C. 20036. Applications with three letters of recommendation should be received by 15 February 1983 by the Conference Board of the Mathematical Sciences, 1529 Eighteenth Street, N.W., Washington, D.C. 20036.

Cottrell College Science Grants. Awarded to support basic research in the natural sciences by faculty members at private undergraduate institutions. Normally given for items of direct expense, for faculty and student summer stipends and for unusual expenses. There are no age limitations, and student participation in the research is encouraged. Published guidelines may be obtained from Dr. Kendall W. King, Vice President--Grants, Research Corporation, 405 Lexington Avenue, New York, New York 10174.

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Cottrell Research Grants. Awarded to support basic investigations in the physical sciences by faculty members at graduate universities and public undergraduate institutions. Normally given for items of direct expense needed to initiate research by younger faculty members or for the speculative research of established investigators. Research may be conducted over any period of time, but renewal grants are not usually considered. Published guidelines may be obtained from Dr. Kendall W. King, Vice President–Grants, Research Corporation, 405 Lexington Avenue, New York, New York 10174.

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 $21,500. 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, 1983. 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 1983-1984 must be submitted before January 1, 1983. 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 average six hours per week and are of a varied and nonroutine nature. The academic-year stipend of $18,000 is supplemented by a two-month resident research fellowship of $2,500. Appointments are for two years and are not renewable. Applicants should write to Martin Arkowitz, Chairman, Department of Mathematics, Dartmouth College, Hanover, New Hampshire 03755 (Attention: Recruiting). Applicants are advised to apply promptly, and no later than January 15, 1983.

Department of State, Agency for International Development. Research grants for research projects and analytical studies on development policy issues emphasizing food production, nutrition, health, education, population, socio-economic and related issues. Research groups are encouraged to propose research to the Agency within the above areas. For further information, write to John Eriksson, Policy Development and Program Review, Bureau for Program and Policy Coordination, Agency for International Development, Washington, D.C. 20523.

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. Approximately 300 awards are made, averaging approximately $18,300 in 1982. For more information write to Gordon N. Ray, President, 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 $21,500 (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, 1983. Harvard is an Equal Opportunity/Affirmative Action Employer.

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. The duration of the fellowship is eleven months, and the stipend will be in the range of $32,000 to $37,000, depending on qualifications. To apply, submit the following by February 4, 1983: résumé; thesis summary; thesis or reprints of publications based on thesis, if available; bibliography with reprints of principal papers; research proposal for the period of your 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. Direct all material to Committee on Postdoctoral Fellowships, Mathematical Sciences Department, IBM Thomas J. Watson Research Center, Post Office Box 218, Yorktown Heights, New York 10598. Applicants will be notified of the Committee’s decisions by March 15, 1983. The Research Center is located in Westchester County about thirty miles north of New York City.

Indiana University, Bloomington. Václav Hlavatý 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 an academic-year salary of at least $20,000. 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 amount of $400 available for professional expenses, such as travel to meetings, supplies, publication costs, etc. Inquiries or requests for application forms should be addressed to Joseph Stampfli, Chairman, Department of Mathematics, Swain Hall East, Indiana University, Bloomington, Indiana 47405. Preference will be given to applications received before January 1, 1983. 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 1983-1984. 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, 1982. 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 one- or two-year renewable appointments. Inquiries should be addressed to the Director, ICASE, Mailstop 132C, NASA Langley Research Center, Hampton, Virginia 23665.

The Institute for Mathematics and its Applications. The institute will sponsor a program on Mathematical Models for the Economics of Decentralized Allocation. This program will be coordinated by Leonid Hurwicz and the topics to be treated include Information Theory of Decentralisation (complexity, geometry, dynamics), Applications of Differential Structures, and Solution Concepts and the Associated Dynamics in Games. Post-doctoral memberships are available with a stipend of $24,800 for 12 months beginning September 1, 1983. Sabbatical support memberships will also be available in the Institute. These appointments will provide partial support for periods from 3 to 12 months. Applicants who will have completed the Doctorate by September 1, 1983, should submit the following materials by January 15, 1983: (1) a curriculum vita including a list of publications, (2) three letters of recommendation, (3) a personal statement of scientific interest, research plans and reasons for wishing to participate in the Institute Program. Persons applying for either type of membership should submit the same information. Send all correspondence to Hans Weinberger, Director, Institute for Mathematics and its Applications, University of Minnesota, 206 Church Street S.E., 514 Vincent Hall, Minneapolis, Minnesota 55455.
Lawrence Berkeley Laboratory. Occasional postdoctoral research appointments. Research areas of interest center on the development of numerical and analytical methods for partial differential equations, particularly those related to energy applications. Current applications include combustion, turbulence, and multiphase flow in porous media. Inquiries should be directed to Professor P. Concus, Lawrence Berkeley Laboratory, Building 50A, Room 2129, University of California, Berkeley, California 94720.

Lawrence Livermore 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 John E. Ranelletti (L-61), Computation Department, Lawrence Livermore Laboratory, University of California, Livermore, California 94550.

Los Alamos National Laboratory. Offered to U.S. citizens holding the Ph.D., with research opportunities in computer science, numerical science, 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 Personnel Services Manager, Mail Stop P-201, Los Alamos National Laboratory, University of California, 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. One- to three-year appointment; salary: $36,600/year; application deadline: December 15 each year. For additional information write to Personnel Services Manager, Mail Stop P-201, 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 $22,500, 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. 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. There are available 20 to 25 twelve month fellowship-type research positions for 1983-1984, beginning August 1983, for new and recent Ph.D.’s (of any age). Stipends will be between $23,000 and $24,000 for the year. There will be special programs at the Institute in ergodic theory and dynamical systems, and infinite dimensional (Kac-Moody) Lie algebras. While a majority of appointments will be in these two areas, a substantial number of appointments are expected to be made in other areas, so applications from candidates in all areas are welcome. Apply to Calvin C. Moore, Deputy Director, Mathematical Sciences Research Institute, 2223 Fulton Street, Room 603, Berkeley, California 94720. Files must be complete by January 10, 1983.

Mathematics Research Center. A limited number of visiting research appointments will be available at all levels from postdoctoral up, in areas of applied or applicable mathematics, interpreted in a broad sense, including solid mechanics, fluid dynamics, applied analysis (primarily nonlinear PDE and ODE), numerical analysis, numerical PDE and scientific computing, probability and statistics, and mathematical programming. During 1983-1984 MRC expects to have a year of concentration in material instabilities and phase transition in solids, continuing the current emphasis on optimum mechanics. The postdoctoral appointments offer Ph.D.’s working in areas of applicable mathematics an opportunity to broaden their contact with applications. Qualifications include outstanding research ability or potential, as attested to by leading mathematicians in the candidate’s field. The University of Wisconsin is an equal employment opportunity institution (Title IX/Title VI). For information write John A. Nohel, Director, Mathematics Research Center, University of Wisconsin, Madison, Wisconsin 53706.

Oskar Morgenstern Distinguished Fellowship at Mathematica. The grant enables a member of the academic or research staff of a university, an official of the U.S. government, or a researcher elsewhere, to spend sabbatical leave at Mathematica. Applicants are expected to have achieved
significant accomplishments in at least one of several areas, including computer programming languages, information management, operations research methods and applications, economic theory, economic and social policy analysis, survey research methodology, arms control, and national defense policy. Information may be obtained from President Tibor Fabian, Mathematica, Inc., P.O. Box 2392, Princeton, New Jersey 08540.


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 $20,000 for recent recipients of the Ph.D. The application deadline is January 27. Inquiries should be sent to Betty Wilson, Administrator, Advanced Study Program, NCAR, P.O. Box 3000, Boulder, Colorado 80307.

National Research Council. 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/Chicano, 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 14, 1983. Further information and application materials may be obtained from the Fellowship Office, National Research Council, 2101 Constitution Avenue, N.W., Washington, D.C. 20418.

National Research Council. Research Associateship Programs. These programs provide scientists and engineers opportunities for postdoctoral research on problems in a variety of scientific disciplines and fields of specialization. The programs are conducted in cooperation with selected Federal organizations with laboratories at approximately sixty-five 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, 1983. Appointments will be made in the spring. Stipends will vary according to the type of appointment, but will not be less than $23,500. Further information and application materials can be obtained from the Associateship Office (JH 608M1), National Research Council, 2101 Constitution Avenue, N.W., Washington, D.C. 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, intelligent systems, and computer systems design. Guidelines on eligibility and proposal preparation are available in “Grants for Scientific Research.” For this brochure and additional information write: Computer Science Section, Division of Mathematical and Computer Sciences, National Science Foundation, 1800 G Street, N.W., Washington, D.C. 20550.

National Science Foundation. Mathematical Sciences Postdoctoral Research Fellowships. (With Research Instructorship Option). The format of this fellowship program has been changed significantly to provide the recipient with increased flexibility in the manner in which he or she can perform as a Fellow. In particular, the stipend portion of the awards will consist of support for two nine-month academic-years and six summer months over three summers. 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 (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 $2,200 per full-time month or $1,000 per half-time month, for a total of $52,800 for the eighteen academic-year months and six summer months. Deadline for applications is December 3, 1982; awards will be announced in early February 1983. Applications will be accepted in core mathematics, applied mathematics, and statistics. For further details write to Alvin I. Thaler, Program Director for Special Projects,
Oak Ridge National Laboratory. Limited number of postdoctoral appointments. Applications are invited from university faculty members for participation in the Laboratory’s research, especially for the summer. Areas of interest are applied mathematics, numerical analysis, mathematical physics, probability, and statistics. Of special interest are well-qualified applicants in applied mathematics or computer science with interest and competence in numerical linear algebra and computational statistics. For further information, call R. C. Ward at 615-574-3125 or write to J. J. Pinajian, Office of Employment and Professional Relations, Oak Ridge National Laboratory, Post Office Box X, Oak Ridge, Tennessee 37830.

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.

OTA Congressional Fellowships. The Office of Technology Assessment, an agency of the U.S. Congress, selects several Congressional Fellows each year for a fellowship period of one year. Candidates must have completed research and training at the doctoral level, or have equivalent experience as judged by the selection committee. The program is open to men and women in all disciplines of science and technology and related policy or research activities, and provides a challenging work experience through participation in policy analyses for the Congress involving the effects of technological applications. Application information can be obtained from: Congressional Fellowships, Office of Technology Assessment, Congress of the United States, Washington, D.C. 20510.

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 1983. Rice University is an Equal Opportunity/Affirmative Action Employer. Inquiries and applications should be addressed to Chairman, Department of Mathematics, Rice University, Box 1892, Houston, Texas 77001.

Rutgers University. Hill Assistant Professorships. Offered for 1983-1984 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 December 31, 1983, 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 is expected to be in excess of $21,000. Inquiries and applications should be addressed to Charles Sims, Chairman, Department of Mathematics, Hill Center for the Mathematical Sciences, Rutgers, The State University of New Jersey, New Brunswick, New Jersey 08903.

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. In neuroscience, postdoctoral fellows as well as those in junior faculty positions will be considered. 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.

Smithsonian Institution. Postdoctoral Fellowships. Appointments to individuals possessing the Ph.D. or equivalent degree, and limited to individuals requiring research training in association with a member of the Institution’s professional staff. Offered annually in the history of mathematics, for a period of from six months to one year. Approximately $17,500 stipend, plus research expense allowance and relocation allowance. Deadline for application is January 15th yearly for the following academic year. Further information and application forms may be obtained from the Office of Fellowships and Grants, Smithsonian Institution, Room 3300, L’Enfant Plaza, Washington, D.C. 20560.

State University of New York at Buffalo. George William Hill and Emmy Noether Research Instructorships for 1983-1984. Applicants should be Ph.D.’s whose degrees will be completed
by September 1, 1983. All areas of pure and applied mathematics will be considered. Each appointment is for two years. The ten-month stipend, beginning September 1983, is $22,000, plus generous staff benefits. Teaching load will total two one-semester courses during the ten-month period. Upon expiration of the two-year appointment, priority consideration for a two-year (tenure-track) appointment as assistant professor will be given and will be based upon success and potential in both research and teaching. Each applicant should prepare a summary of his or her post-high school educational background, as well as a sketch of past and projected research activity, and should request at least four mathematicians to send letters of recommendation. Application forms are available upon request. Applications and supporting letters should be sent to Dr. Zbigniew Zielezny, Chairman, Hill-Noether Committee, Department of Mathematics, SUNY/Buffalo, 106 Diefendorf Hall, Buffalo, New York 14214, so as to arrive by December 15, 1982. SUNY/Buffalo is an Equal Opportunity/Affirmative Action Employer. SUNY/Buffalo is interested in identifying prospective minority and women candidates. No person in whatever relation with SUNY/Buffalo shall be subject to discrimination on the basis of race, ethnic background, national origin, religion, color, age, sex or condition of handicap.

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 Temple (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 20205. An enclosed self-addressed gummed mailing label will expedite handling.

University of California, Irvine. Visiting Irvine Lectureship 1983-1984. The lectureship enables mathematicians (of any age) beginning their career who show definite promise in research to participate in an environment of vigorous mathematical research and instruction. Appointment is for one year; can be renewed for second year. Annual salary: $18,552. Teaching duties comparable to those of regular faculty. Lecturers are expected to direct seminars in their specialty. Applications and three letters of recommendation must be received by February 15, and should be accompanied by a curriculum vitae and an account of works in print or preparation, and a brief description of research plans. All enquiries and applications should be sent to: The Irvine Lectureships in Mathematics, Department of Mathematics, University of California, Irvine, California 92717. An Affirmative Action/Equal Opportunity Employer.

University of California, Los Angeles. Earle Raymond Hedrick Assistant Professorships in Mathematics. The Department of Mathematics, University of California, Los Angeles, will make two appointments for the year 1983-1984. These awards will be made to mathematicians with Ph.D.'s who show strong promise in research. The appointment will be for two years at an annual salary of $24,200, plus a summer research supplement of $2,500. 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. The deadline for applications is January 15, 1983. UCLA is an Equal Opportunity/Affirmative Action Employer.

University of California, San Diego. S. E. Warschawski Assistant Professorship. Special two-year position offered by the University of California, San Diego. The nine-month salary is $24,200. Candidates should possess a Ph.D. degree in mathematics or expect to receive one prior to September 1983. Selection will be based primarily on demonstrated research achievement. Teaching experience is desirable. To apply, have at least three letters of reference, vita and publications sent to the Chair, Department of Mathematics, University of California, San Diego,
La Jolla, California 92037. All applications received by January 1, 1983 will receive thorough consideration. University of California, San Diego is an Equal Opportunity/Affirmative Action Employer. Position subject to availability of funds.

University of Chicago. Leonard Eugene Dickson Instructorships in Mathematics. Intended for men and women completing the doctorate in mathematics prior to autumn 1983. Appointment is for two years with an annual salary of $25,000, instruction averaging four hours a week. Application deadline is January 15, 1983. Further information may be obtained from the Chairman, Department of Mathematics, University of Chicago, 5734 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. Theophil Henry Hildebrandt Research Assistant Professorships. Designed to provide mathematicians with favorable circumstances for the development of their research talents. Preference 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 1983-1984 will be determined later; there is a good possibility of additional income during the summer. Appointment is for three years. 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 3. Appointments will be announced by the middle of February. Applications should be made to F. W. Gehring, Chairman, Department of Mathematics, University of Michigan, Ann Arbor, Michigan 48109. 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, 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. A basic stipend of $16,000 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 $13,100. Applications may be obtained from the Director of Graduate Programs, Faculty of Arts and Sciences, University of Pittsburgh, Pittsburgh, Pennsylvania 15260.

University of Wisconsin, Madison. Van Vleck Assistant Professorships 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 $21,500 per academic year. All positions are for specified two- or three-year terms. Deadline for applications is December 31, 1982. Application blanks may be obtained by writing J. Marshall Osborn, Chairman, Department of Mathematics, 213 Van Vleck Hall, University of Wisconsin, Madison, Wisconsin 53706. University of Wisconsin-Madison is an Equal Opportunity Employer.

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 1982-1983 salary is $21,000; an increase is expected for 1983-1984. 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 1983.

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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-one African countries, relevant African ministries or universities, or the Division of Education, African-American Institute, 833 United Nations Plaza, New York, New York 10017.

Alliance Française de New York. For U.S. Nationals, a limited number of scholarships for graduate study and research in France. Fields unrestricted. Scholarships are in the amount of $2,000 to $3,000. Applicants must have a working knowledge of French. For further information American students should write to Institute of International Education, Division of Study Abroad Programs, 809 United Nations Plaza, New York, New York 10017.

American-Scandinavian Foundation. Fellowships for study in Scandinavia (Denmark, Finland, Iceland, Norway, and Sweden). Applicants must have completed their undergraduate education. 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 January 30. 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.

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, 1982. 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 trimester (or 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, 1982. 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 Study Abroad Programs Division, Institute of International Education, 809 United Nations Plaza, New York, New York 10017.

Fulbright Program. Postdoctoral Awards. United States Government grants available annually in all fields for university lecturing and postdoctoral research abroad. Eligibility requirements include U.S. citizenship; for lecturing, college teaching experience; for research, a doctoral degree or recognized professional standing at the time of application. In certain cases a knowledge of the language of the host country is required. Write to Council for International Exchange of Scholars, Suite 300, Eleven Dupont Circle, Washington, D.C. 20036. (Telephone 202-833-4950)
Minna-James-Heineman-Stiftung. *Research Abroad.* Grants are given to scientists of all nationalities to carry out research in foreign countries, thereby serving scientific knowledge and international cooperation. Awards are made for a maximum period of not more than one year with a maximum amount of 1,500–2,000 DM per month. The applicant must be a graduate, and applicants teaching at universities are preferred. The deadline for applications is February 1 each year. For details of application requirements and further information write to Minna-James-Heineman-Stiftung, Am Hohen Ufer 6, D-3000 Hannover 1, Federal Republic of Germany.

Alexander von Humboldt Foundation. *Research Fellowships.* Provides postdoctoral scholars with the opportunity of carrying out a research project at a university or other research institute within the Federal Republic of Germany and 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. Applications may be obtained from and returned directly to the Alexander von Humboldt Foundation, 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. Twelve 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 July 1 each year. For details write the Council for International Exchange of Scholars, Attention: Indo-American Fellowships Program, Eleven Dupont Circle, Washington, D.C. 20036.

International Research and Exchanges Board (IREX). This board 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 usually made for a semester or an academic year, but longer or shorter stays are possible by special arrangement. For more detailed information, write to the International Research and Exchanges Board, 655 Third Avenue, New York, New York 10017.

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 Marita 13A, 50139 Firenze, Italy. In their letter they should include information concerning their curriculum, their research program, the names of the Italian mathematicians they would like to work with. They may also include a reference letter or have it sent directly.

Kosciusko 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 January 15 for the following academic year. Write to Scholarship and Exchange Programs, Kosciusko 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, D.C. 20008; (3) South: Suite 912, 225 Peachtree Street, N.W., Atlanta, Georgia 30303; (4) Central: 33 North Dearborn Street, Chicago, Illinois 60602; (5) Pacific: 9th Floor, 120 Montgomery Street, San Francisco, California 94104.

National Academy of Sciences. For U.S. scientists who wish to commence visits from January 1984 to December 1984 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 in the mathematical 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, USSR/EE, 2101 Constitution Avenue, N.W. (JH218), Washington, D.C. 20418.

National Academy of Sciences. Exchange Programs with China. Several programs of scholarly exchange are available for graduate students and postdoctoral scholars for long-term study (10 to 12 months) or research (3 to 12 months) in affiliation with Chinese universities and research institutes. Application is open to citizens of the United States regardless of national origin, sex, or religious affiliation. Grants include transportation to and from China, stipend, living and travel allowances while in China, and a limited research and education materials allowance. Dependent travel or support are not provided. Application should be made either to the Graduate Program or to the Research Program. Application deadlines are early November for the following academic year. Inquiries should be addressed to the Committee on Scholarly Communication with the People's Republic of China (CSCPBC), National Academy of Sciences, 2101 Constitution Avenue, N.W., Washington, D.C. 20418.

National Science Foundation. Support for U.S. participation in seminars, cooperative research projects, and visiting scientist activities under bilateral programs with certain foreign countries. For information about these programs request NSF Guide to Programs from Forms and Publications, National Science Foundation, Washington, D.C. 20550, or write to Division of International Programs, National Science Foundation, Washington, D.C. 20550.

National Science Foundation. Travel awards for U.S. citizens who are either predoctoral students or individuals who have held a doctoral degree for seven 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 National Science Foundation, NATO Postdoctoral Fellowships in Science Program, Office of Scientific and Engineering Personnel and Education, Washington, D.C. 20550.

National Science Foundation. United States–India Exchange. This program grants travel support to senior scientists of the United States for periods from two weeks to two months, for work in India with Indian colleagues on projects of mutual interest. Applications should be submitted before March 15 for visits commencing after November 15 of the same year and September 15 for visits after May 15 of the following year. For information and application forms write to: U.S.–India Exchange of Scientists, Division of International Programs, National Science Foundation, Washington, D.C. 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; Canada–Fisheries and Oceans–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 $24,048, 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 doctorate degree, or a master’s degree plus appropriate research experience. The closing date for applications is January 15 each year. Write to the Scholarships Officer, Natural Sciences and Engineering Research Council of Canada, Montréal Road, Ottawa, Ontario, Canada K1A 0R6.

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 three years, covering mainly travel and living expenses abroad for
principal investigators visiting partner laboratories or for staff members needing to acquire or provide expertise or special training in the partner laboratory(ies). 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 Organisation. Postdoctoral Fellowships. Awarded for nine- to twelve-month periods, for scientific study or work at appropriate nonprofit institutions in NATO countries, other than the U.S., or countries that cooperate with NATO. This program is for citizens or nationals of the U.S. Fellows receive a stipend of $18,000 for twelve-month tenure, plus dependency and travel allowances. Application deadline is early November. For information and application material, write to NATO Program, Office of Scientific and Engineering Personnel and Education, National Science Foundation, Washington, D.C. 20550.

Organisation of American States. See entry in section on Study in the U.S. for Foreign Nationals.

Royal Norwegian Council for Scientific and Industrial Research. Postdoctorate Fellowships. Fields: engineering and applied sciences. Studies can be carried out at the Universities of Oslo and Bergen, the Technical University of Norway, and at institutes for applied research in Oslo, Bergen, and Trondheim. English may be used at all institutes; German and French at some institutes. Deadline each year is December 1. Write to Royal Norwegian Council for Scientific and Industrial Research, Sognsveien 72, P.O. Box 70, Tøsen, Oslo 8, Norway.

Weizmann Institute of Science. Feinberg Graduate School Postdoctoral Fellowships. 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.B. 76-100, Israel. The application should reach the above address not later than November 15, 1982 for fellowships starting in April 1983 and not later than May 15, 1983 for fellowships starting in October 1983.

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.

Alliance Française de New York. For French students, a limited number of scholarships for graduate study in the U.S.; fields unrestricted. Scholarships are in the amount of $2,000 to $3,000. Applicants must have a working knowledge of English. For further information, write to Commission Franco-Américaine d'Echanges Universitaires et Culturels, 9, rue Chardin, Paris, 75016, France.

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 Yhdistysten Liitto, Mechelininkatu 10 A 10, F-001 00 Helsinki 10, Finland; Íslensk-Amerisk Félágid, P.O. Box 7051, Reykjavík, Iceland; Norge-Amerika Foreningen, Drammensveien 20, Oslo 2, Norway; Sverige-Amerika Stiftelsen, Greve Turegatan 14, S-114 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 binational 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. I.I.E. develops and administers exchange programs for a number of organizations and corporations, and administers U.S. Government grants under the Fulbright Act under the educational exchange programs of the U.S. Information Agency. 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 undertakes to place 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, 39 Dondoukov Boulevard, Sofia, Bulgaria; Foreign Department, Ministry of Education of the Czech Republic, Karmelitiska, 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; Cultural International 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, Kosanciev 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, Leninskiy prospekt 14, Moscow V-71, USSR.

**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 November 1. Write to Secretary, Kennedy Memorial Trust, Association of Commonwealth Universities, 36 Gordon Square, London WC1H OPP, England.

**Kosciuszko Foundation.** One-year grants to doctoral and postdoctoral students. Applicants must be Polish citizens and have excellent command of English. Apply by January 15 for the following academic year. Write to Scholarship and Exchange Programs, the Kosciuszko Foundation, 15 East 65th Street, New York, New York 10021.

**Organisation of American States (OAS).** Fellowships are available to citizens or permanent residents of OAS member countries for advanced study or research in another member country. The Advisory Board of Fellowships of the OAS meets twice a year for the selection of candidates: in June and October. Therefore, the applications should be presented with enough time to be completed no later than April 30 or August 31, respectively. For information write to Chief, Trainee Selection, Organization of American States, Washington, D.C. 20006, U.S.A.

**U.S.-India Exchange.** Grants for Indian scientists invited to the U.S. by U.S. institutions. Information can be obtained from the Council of Scientific and Industrial Research (CSIR), New Delhi, India.

**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, AAUW Educational Foundation, 2401 Virginia Avenue, N.W., Washington, D.C. 20037.


**Basic Facts on Foreign Study.** A fact sheet on what to expect on a study-abroad program and where to find pertinent information; 1982, 6 pp.; single copies free, $10 per 100. Communications Division, Institute of International Education, 809 United Nations Plaza, New York, New York 10017.
Chronicle Student Aid Annual, 1982. Catalog No. 502A. $14.25 plus 10% shipping, cash with order or formal purchase order. Chronicle Guidance Publications, Inc., Moravia, New York 13118. Provides information on 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. Revised annually.


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.


Introduction to Education in the People's Republic of China and U.S.-China Educational Exchanges, 1982. Contains an account of China's educational system and information about educational exchange programs, for both scholars and students. To obtain a copy for $1 postage and handling charges, or a list of additional clearinghouse publications on U.S.-China exchanges, write to the U.S.-China Education Clearinghouse, 1860 Nineteenth Street, N.W., Washington, D.C. 20009.

International Research and Exchanges Board (IREX). Programs administered by IREX include exchanges for a semester or an academic year with the USSR and Eastern Europe, grants to promote new exchanges, and collaborative projects in the social sciences and humanities, preparatory fellowships and language programs. The IREX programs provide access to Soviet universities and also provide access at the predoctoral and postdoctoral levels to East European and Soviet universities and East European academies of sciences. For a program announcement describing the full range of IREX programs, write to the International Research and Exchanges Board, 655 Third Avenue, New York, New York 10017.

Kappa Kappa Gamma Fraternity. Awards for graduate study. Application forms are available from Dr. Miriam Locke, Chairman of Fellowships, Kappa Kappa Gamma Fraternity, 1715 Fourth Street, Tuscaloosa, Alabama 35401. Candidates must receive by June of the year of application a bachelor's degree from an institution where there is a chapter of Kappa Kappa Gamma Fraternity, or plan to attend a graduate school which has a chapter. Only citizens of the United States or Canada are eligible.


National Endowment for the Humanities. The Endowment operates through two fellowship programs and a summer stipend program. Information about the these programs which may be of particular interest may be obtained from James H. Blessing, Division of Fellowships, National Endowment for the Humanities, 806 15th Street, N.W., Washington, D.C. 20506.

Rhodes Scholarships. For U.S. citizens; 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 164, Arlington, Massachusetts 02174, published quarterly, $28 per year. Up-to-date information regarding student financial aid. Annotated bibliography of books and professional journals.

Selected List of Fellowship Opportunities and Aids to Advanced Education for United States Citizens and Foreign Nationals. Fellowship Office, National Science Foundation, 1800 G Street,
Avenue, New York, New York. The program provides support to advanced doctoral candidates at 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 10016.

Study Abroad, 1979–1981. Provides information on several hundred thousand study grants in over 100 countries for the years 1979–1981. Write to UNESCO: in the United States, UNIPUB, 1180 Avenue of the Americas, New York, New York 10036; in Europe, Place de Fontenoy, Paris 7e, France. (720 pp., $9.95)

Teaching Abroad. Covers teaching programs conducted by U.S. and foreign governments, multinational agencies, international corporations and voluntary organizations; gives program details and requirements, application procedures, benefits; 87 pp. UNIPUB, 1180 Avenue of the Americas, New York, New York 10036. ($6)

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, 1750 Pennsylvania Avenue, N.W., Washington, D.C. 20547.


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