SPECIAL ISSUE
ASSISTANTSHIPS AND FELLOWSHIPS
IN MATHEMATICS IN 1972-1973
CONTENTS

ASSISTANTSHIPS AND FELLOWSHIPS
IN MATHEMATICS IN 1971-1972

I. For Graduates at Universities ......................... 1123

II. Stipends for Study and Travel ....................... 1228

   Graduate Support .................................. 1228
   Postdoctoral Support ............................... 1230
   Travel and Study Abroad ......................... 1234
   Study in the U.S. for Foreign Nationals .... 1236
   Sources of Fellowship Information .......... 1237

TAX STATUS OF GRANTS .................................. 1238

INDEX OF ABSTRACTS, Volume 18 ....................... 1241

INDEX, Volume 18 ...................................... 1271
The thirteenth Special Issue of the *Notices* contains listings of assistantships and fellowships available in mathematics and related sciences for the academic year 1972-1973 for graduate students at universities and of stipends which are available for travel and study. In addition, this issue includes a short article on the tax status of grants and indexes for abstracts and articles published in the *Notices* during 1971.

The listing for assistantships and fellowships at universities includes 437 departments of mathematics, applied mathematics, statistics, computer science, and related mathematical disciplines; these represent 320 colleges and universities. The institutions in the United States have been listed alphabetically by state, followed by an alphabetical listing of Canadian institutions.
ASSISTANTSHIPS AND FELLOWSHIPS
IN MATHEMATICS IN 1972-1973

I. FOR GRADUATE STUDY AT UNIVERSITIES

<table>
<thead>
<tr>
<th>TYPE of financial assistance</th>
<th>STIPEND amount in dollars</th>
<th>TUITION if not included in stipend (dollars)</th>
<th>SERVICE REQUIRED hours per week</th>
<th>type of service</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9 or 12 months</td>
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</tbody>
</table>

| ALABAMA                     |                           |                                             |                                 |                |

Auburn University

AUBURN, ALABAMA 36830
L. P. Burton, Head
Department of Mathematics
Applications must be filed by February 10, 1972

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (7); geometry and topology (7); analysis and functional analysis (7). TOTAL 21.

| Fellowship (2)       | 2400-2800               | 12  | 150/qtr.                           | 5-10 Teaching or equivalent |
| Teaching Assistantship (40) | 2520-4800            | 9   | 150/qtr.                           |                             |

Samford University

BIRMINGHAM, ALABAMA 35209
W. D. Peeples, Jr., Head
Department of Mathematics and Engineering
Applications deadline is open

| Teaching Assistantship (5) | 1935 | 9  | 45/hr.                           | 6                             |
| Scholarship (1)            | 1500 | 9  | 45/hr.                           |                              |

University of Alabama in Birmingham

BIRMINGHAM, ALABAMA 35233
R. J. Crittenden, Chairman
Department of Mathematics
Applications must be filed by June 1, 1972

| Teaching Assistantship (8) | 2500-3150 | 9  | 480     | 4-8 Teaching |

University of Alabama in Huntsville

HUNTSVILLE, ALABAMA 35807
James M. Horner, Chairman
Department of Mathematics
Applications must be filed by February 15, 1972

<p>| Teaching Assistantship (6) | 3000-3180 | 9  | 4     | Teaching |
|                           |          |    | 4     | Miscellaneous service |</p>
<table>
<thead>
<tr>
<th>UNIVERSITY, ALABAMA 35486</th>
<th>NUMBER OF DEGREES AWARDED IN 1971</th>
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<tr>
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<td>Baccalaureate degrees by institution</td>
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<td></td>
<td>Baccalaureate degrees by department</td>
</tr>
<tr>
<td></td>
<td>Master's degrees by department</td>
</tr>
<tr>
<td>Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (4); geometry and topology (9); analysis and functional analysis (13); probability and statistics (1); applied mathematics (7). TOTAL 34.</td>
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</tr>
<tr>
<td>Fellowship (4)</td>
<td>2400-2400</td>
</tr>
<tr>
<td>Teaching Fellowship (4)</td>
<td>3160-3760</td>
</tr>
<tr>
<td>Teaching Assistantship (25)</td>
<td>2425-3250</td>
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<tr>
<td>NSF Traineeship (3)</td>
<td>2400-2800*</td>
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</tbody>
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*Plus dependency allowance.

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<tr>
<th>COLLEGE, ALASKA 99701</th>
<th>NUMBER OF DEGREES AWARDED IN 1971</th>
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<tbody>
<tr>
<td></td>
<td>Baccalaureate degrees by institution</td>
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<td></td>
<td>Baccalaureate degrees by department</td>
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<td></td>
<td>Master's degrees by department</td>
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<tr>
<td>Teaching Assistantship (6)</td>
<td>3825-4050</td>
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</table>

<table>
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<tr>
<th>TEMPE, ARIZONA 85281</th>
<th>NUMBER OF DEGREES AWARDED IN 1971</th>
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<tr>
<td></td>
<td>Baccalaureate degrees by institution</td>
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<tr>
<td></td>
<td>Baccalaureate degrees by department</td>
</tr>
<tr>
<td></td>
<td>Master's degrees by department</td>
</tr>
<tr>
<td>Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (5); geometry and topology (5); logic (1); analysis and functional analysis (2). TOTAL 13.</td>
<td></td>
</tr>
<tr>
<td>Fellowship (2)</td>
<td>2400-2800</td>
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<tr>
<td>Teaching Assistantship (50)</td>
<td>2800-3500</td>
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<tr>
<td>Scholarship (3)</td>
<td>890</td>
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<table>
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<tr>
<th>FLAGSTAFF, ARIZONA 86001</th>
<th>NUMBER OF DEGREES AWARDED IN 1971</th>
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<tr>
<td></td>
<td>Baccalaureate degrees by institution</td>
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<td></td>
<td>Master's degrees by department</td>
</tr>
<tr>
<td>Teaching Assistantship (5)</td>
<td>2250</td>
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</table>
GRADUATE STUDY
AT THE
UNIVERSITY OF ARIZONA

The University of Arizona offers graduate work leading to the M. A., M. S., and the Ph. D. degrees in mathematics. Areas of specialization include:

- Number Theory
- Algebra
- Convexity
- Calculus of Variations
- Differential Geometry
- Combinatorial Theory
- Statistics and Probability
- Functional Analysis
- Topology
- Analysis
- Relativity
- Differential Equations
- Continuum Mechanics

Application for assistantships and fellowships should be made prior to March 15. Applications for admission and financial support may be obtained by writing to:

HEAD
Department of Mathematics
University of Arizona
Tucson, Arizona 85721
University of Arizona

TUCSON, ARIZONA 85721
Hanno Rund, Head
Department of Mathematics

Applications must be filed by March 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (1); geometry and topology (2); analysis and functional analysis (3); probability and statistics (3); applied mathematics (2). TOTAL 11.

<table>
<thead>
<tr>
<th>TYPE OF SERVICE REQUIRED</th>
<th>STIPEND amount in dollars</th>
<th>TUITION if not included in stipend (dollars)</th>
<th>SERVICE REQUIRED hours per week</th>
<th>TYPE OF SERVICE</th>
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<tbody>
<tr>
<td>Teaching Assistantship (50)</td>
<td>3250-3750</td>
<td>9</td>
<td>6</td>
<td>Teaching</td>
</tr>
<tr>
<td>Scholarship (6)</td>
<td>Tuition</td>
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</tr>
</tbody>
</table>

ARKANSAS

Arkansas State University

STATE UNIVERSITY, ARKANSAS 72406
J. L. Linnstaedter, Chairman
Department of Mathematics

Applications must be filed by April 1, 1972

<table>
<thead>
<tr>
<th>TYPE OF SERVICE REQUIRED</th>
<th>STIPEND amount in dollars</th>
<th>TUITION if not included in stipend (dollars)</th>
<th>SERVICE REQUIRED hours per week</th>
<th>TYPE OF SERVICE</th>
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<tbody>
<tr>
<td>Teaching Assistantship (6)</td>
<td>2400-3045</td>
<td>12</td>
<td>400</td>
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</table>

State College of Arkansas

CONWAY, ARKANSAS 72032
Frank M. Hudson, Chairman
Department of Mathematics

Applications must be filed by April 1, 1972

<table>
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<tr>
<th>TYPE OF SERVICE REQUIRED</th>
<th>STIPEND amount in dollars</th>
<th>TUITION if not included in stipend (dollars)</th>
<th>SERVICE REQUIRED hours per week</th>
<th>TYPE OF SERVICE</th>
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<tbody>
<tr>
<td>Teaching Assistantship (5)</td>
<td>2000</td>
<td>9</td>
<td>payable 6 Assisting in teaching</td>
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</table>

University of Arkansas

FAYETTEVILLE, ARKANSAS 72701
James E. Scroggs, Chairman
Department of Mathematics

Applications must be filed by February 15, 1972

<table>
<thead>
<tr>
<th>TYPE OF SERVICE REQUIRED</th>
<th>STIPEND amount in dollars</th>
<th>TUITION if not included in stipend (dollars)</th>
<th>SERVICE REQUIRED hours per week</th>
<th>TYPE OF SERVICE</th>
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<tbody>
<tr>
<td>Fellowship (10)</td>
<td>3000</td>
<td>12</td>
<td>400 6</td>
<td>Teaching</td>
</tr>
<tr>
<td>Teaching Assistantship (30)</td>
<td>1350-3000</td>
<td>9</td>
<td>6</td>
<td></td>
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</tbody>
</table>

California Institute of Technology

PASADENA, CALIFORNIA 91109
W. A. J. Luxemburg, Executive Officer
Department of Mathematics

Applications must be filed by February 15, 1972

<table>
<thead>
<tr>
<th>TYPE OF SERVICE REQUIRED</th>
<th>STIPEND amount in dollars</th>
<th>TUITION if not included in stipend (dollars)</th>
<th>SERVICE REQUIRED hours per week</th>
<th>TYPE OF SERVICE</th>
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<tr>
<td>Fellowship (2)</td>
<td>2400-2800</td>
<td>12</td>
<td>4</td>
<td>Academic year</td>
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<tr>
<td>Teaching Fellowship (7)</td>
<td>3400-3800</td>
<td>12</td>
<td>4</td>
<td></td>
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<tr>
<td>Teaching Assistantship (13)</td>
<td>2730-3260</td>
<td>9</td>
<td>15</td>
<td></td>
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<tr>
<td>Research Assistantship (2)</td>
<td>3150-3670</td>
<td>9</td>
<td>30 Summer</td>
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<tr>
<td>Scholarship</td>
<td>2645</td>
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</table>

1126
California Institute of Technology

PASADENA, CALIFORNIA 91109
Gerald B. Whitham, Executive Officer
Department of Applied Mathematics

Applications must be filed by February 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: applied mathematics (8). TOTAL 8.

<table>
<thead>
<tr>
<th>TYPE OF SERVICE</th>
<th>STIPEND</th>
<th>TUITION</th>
<th>SERVICE REQUIRED</th>
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</thead>
<tbody>
<tr>
<td>Fellowship</td>
<td>2400-3000</td>
<td>payable</td>
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<tr>
<td>Teaching Assistantship</td>
<td>2730-3260</td>
<td>*</td>
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<tr>
<td>Research Assistantship</td>
<td>2100-2600</td>
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</table>

*Tuition Scholarship usually awarded with Teaching Assistantship

California State College at Fullerton

FULLERTON, CALIFORNIA 92631
Edsel F. Stiel, Chairman
Department of Mathematics

Applications must be filed by November 30, 1972

Teaching Assistantship (2) 889-1778 Sem.

*Fees are $77 per semester plus nonresident tuition of $37 per semester unit.

California State College at Long Beach

LONG BEACH, CALIFORNIA 90804
Charles W. Austin, Chairman
Department of Mathematics

Applications must be filed by May 1, 1972

Teaching Assistantship (8) 1627-2987 9

Claremont Graduate School

CLAREMONT, CALIFORNIA 91711
William J. LeVeque, Acting Chairman
Department of Mathematics

Applications must be filed by February 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: analysis and functional analysis (1). TOTAL 1.

<table>
<thead>
<tr>
<th>TYPE OF SERVICE</th>
<th>STIPEND</th>
<th>TUITION</th>
<th>SERVICE REQUIRED</th>
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<tbody>
<tr>
<td>Fellowship</td>
<td>2400-2800</td>
<td>12</td>
<td></td>
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Fresno State College

FRESNO, CALIFORNIA 93710
D. J. Donohue, Acting Chairman
Department of Mathematics

Applications must be filed by April, 1972

Teaching Assistantship (8) 1000-2000 9
<table>
<thead>
<tr>
<th>TYPE of financial assistance</th>
<th>STIPEND amount in dollars</th>
<th>TUITION if not included in stipend (dollars)</th>
<th>SERVICE REQUIRED hours per week</th>
<th>type of service</th>
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<tbody>
<tr>
<td>Scholarship</td>
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<td></td>
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<tr>
<td>Teaching Assistantship</td>
<td>2800</td>
<td>9</td>
<td>6</td>
<td>Teaching</td>
</tr>
<tr>
<td>Graduate Assistantship</td>
<td>2100</td>
<td>10</td>
<td>20</td>
<td>Laboratory assisting and Reading</td>
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<tr>
<td>Teaching Assistantship</td>
<td>2829-3220</td>
<td>9</td>
<td>80/sem.</td>
<td>Teaching</td>
</tr>
</tbody>
</table>

**Loyola University of Los Angeles**

LOS ANGELES, CALIFORNIA 90045  
Clarence J. Wallen, Chairman  
Department of Mathematics

<table>
<thead>
<tr>
<th>NUMBER OF DEGREES AWARDED IN 1971</th>
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<tbody>
<tr>
<td>Baccalaureate degrees by institution</td>
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<tr>
<td>Baccalaureate degrees by department</td>
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</table>

**Sacramento State College**

SACRAMENTO, CALIFORNIA 95819  
M. Richard Porter, Chairman  
Department of Mathematics and Statistics

Applications must be filed by April 15, 1972

<table>
<thead>
<tr>
<th>NUMBER OF DEGREES AWARDED IN 1971</th>
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<tr>
<td>Baccalaureate degrees by institution</td>
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<tr>
<td>Baccalaureate degrees by department</td>
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<tr>
<td>Master's degrees by department</td>
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</table>

**San Diego State College**

SAN DIEGO, CALIFORNIA 92115  
Peter W. Shaw, Chairman  
Department of Mathematics

Applications must be filed by April 1, 1972

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<th>NUMBER OF DEGREES AWARDED IN 1971</th>
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<tr>
<td>Baccalaureate degrees by institution</td>
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<td>Baccalaureate degrees by department</td>
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<tr>
<td>Master's degrees by department</td>
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**The Claremont Colleges**

The doctoral program in mathematics at the Claremont Graduate School was started in 1968, with the help of an NSF Departmental Development Grant. It is expected that a number of full fellowships will be available for 1971-72. The Graduate School offers the Ph.D. in 14 fields and the M.A. in 23 fields. Claremont Men's College, Harvey Mudd College, Pitzer College, Pomona College, and Scripps College have long been known for the quality of their faculties and graduates. The following members of the Graduate Faculty in Mathematics (C.G.S. mathematicians and most of those at the other Claremont Colleges) are grouped by major fields of interest, with the institution of their Ph.D. indicated.


For application blanks and a booklet of information, write to:

Professor R. C. James  
CLAREMONT GRADUATE SCHOOL  
Claremont, California 91711
San Jose State College

SAN JOSE, CALIFORNIA 95114
Gerald C. Preston, Chairman
Department of Mathematics
Applications must be filed by February 15, 1972

Teaching Fellowship (12) 1700–3400 9
Teaching Intern (6) 2000–3000 12

Stanford University

STANFORD, CALIFORNIA 94305
Ralph Phillips, Chairman
Department of Mathematics
Applications must be filed by January 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: geometry and topology (3); logic (10); analysis and functional analysis (13); probability and statistics (10); applied mathematics (5); combinatorial analysis (1). TOTAL 42.

Fellowship (3) 3000* 12
Graduate Assistantship** (42) 2400–2690 9*** ****

*In some cases Fellows serve as Course Assistants of Teaching Fellows for one quarter for an additional stipend of $840–$1050
**Graduate Assistants serve for one quarter as Teaching Fellows, for one quarter as Course Assistants, and for one quarter as Research Assistants
***In some cases additional stipends of $533 are available for study in the summer quarter
****3hrs./week teaching or assisting for two quarters; one quarter research with no formal duties

Stanford University

STANFORD, CALIFORNIA 94305
George E. Forsythe, Chairman
Department of Computer Science
Applications must be filed by January 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (55). TOTAL 25.

Fellowship (3) 3000 12
Teaching Fellowship (1) 3150 9 < 20
Teaching Assistantship (8) 2835–3060 9 < 20
Research Assistantship (40) 2835–3195 9 < 20

Stanford University

STANFORD, CALIFORNIA 94305
Gerald J. Lieberman, Chairman
Department of Operations Research
Applications must be filed by March 1, 1972

Ph. D. degrees awarded during the last three years by field of specialization: operations research (27). TOTAL 27.

Fellowship (10) 1800* 9
Research Assistantship (18) 2400 9 20 Research

*If student desires, he can grade papers and earn an additional $750
Stanford University

STANFORD, CALIFORNIA 94305
Rupert G. Miller, Jr., Chairman
Department of Statistics
Applications must be filed by January 15, 1972

Ph. D. degrees awarded during the last three years by field of specialization: probability and statistics (27). TOTAL 27.

<table>
<thead>
<tr>
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<td>amount in dollars</td>
<td>9 or 12 months in stipend (dollars)</td>
<td>hours per week</td>
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<td>Fellowship (3)</td>
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<td></td>
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<tr>
<td>Research Assistantship (12)</td>
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<td>9</td>
<td></td>
</tr>
<tr>
<td>Traineeships (9)</td>
<td>2400</td>
<td>9</td>
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University of California, Berkeley

BERKELEY, CALIFORNIA 94720
John W. Addison, Chairman
Department of Mathematics
Applications must be filed by December 1, 1971 for fellowships; February 1, 1972, for assistantships

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (19); geometry and topology (38); logic (9); analysis and functional analysis (32); computer science and numerical analysis (2); applied mathematics (14). TOTAL 114.

<table>
<thead>
<tr>
<th>NUMBER OF DEGREES AWARDED IN 1971</th>
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<tr>
<td>Baccalaureate degrees by institution 4376</td>
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<tr>
<td>Baccalaureate degrees by department 186</td>
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<td>Master's degrees by department 48</td>
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</table>

Fellowship (64) 1800–3000* 9 14 Teaching, Office hours
Teaching Assistantship (66) 3447–3576 9
Research Assistantship (30) 3660 9

Me fellowships carry additional dependency allowances

University of California, Berkeley

BERKELEY, CALIFORNIA 94720
C. L. Chiang, Chairman
Program in Biostatistics
Applications must be filed by January 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: biostatistics (6). TOTAL 6.

<table>
<thead>
<tr>
<th>NUMBER OF DEGREES AWARDED IN 1971</th>
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<tr>
<td>Baccalaureate degrees by Institution 4376</td>
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<tr>
<td>Master's degrees in program 3</td>
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</table>

Teaching Assistantship (2) 2745 9 15 Teaching
Research Assistantship (2) 2745 9 15 Research
Scholarship (15) 2400–6000 12

University of California, Berkeley

BERKELEY, CALIFORNIA 94720
Martin Graham, Chairman
Department of Computer Science
Applications must be filed by March 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (3). TOTAL 3.

<table>
<thead>
<tr>
<th>NUMBER OF DEGREES AWARDED IN 1971</th>
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<tr>
<td>Baccalaureate degrees by institution 4376</td>
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<tr>
<td>Baccalaureate degrees by department 105</td>
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<td>Master's degrees by department 14</td>
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Fellowship (1) 2500–3000 9 10 Teaching
Teaching Assistantship (8) 383/mo. 9
Research Assistantship (5) 305/mo. 9 10 R. A.
University of California, Berkeley
BERKELEY, CALIFORNIA 94720
J. F. Staal, Chairman
Group in Logic and the Methodology of Science
Applications must be filed by December 1, 1971, for fellowships; February 1-15, 1972, for teaching assistantships
Ph. D. degrees awarded during last three years by field of specialization: logic (3). TOTAL 3.
The type of financial assistance and the number anticipated in 1972–1973 are impossible to estimate at this time.

University of California, Berkeley
BERKELEY, CALIFORNIA 94720
E. L. Scott, Chairman
Department of Statistics
Applications must be filed by December 1, 1971, for fellowships; January 15, 1972, for assistantships
Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (31); biostatistics (10). TOTAL 41.

University of California, Davis
DAVIS, CALIFORNIA 95616
Kurt Kreith, Chairman
Department of Mathematics
Applications must be filed by January 15, 1972
Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (6); geometry and topology (1); analysis and functional analysis (1); probability and statistics (3). TOTAL 11.

University of California, Irvine
IRVINE, CALIFORNIA 92664
Ray A. Kunze, Chairman
Department of Mathematics
Applications must be filed by March 1, 1972
Ph. D. degrees awarded during the last three years by field of specialization: geometry and topology (1); logic (1); analysis and functional analysis (7); probability and statistics (2). TOTAL 11.
University of California, Los Angeles

LOS ANGELES, CALIFORNIA 90024

Philip C. Curtis, Jr., Chairman
Department of Mathematics

Applications must be filed by December 30, 1971

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (9); geometry and topology (8); logic (4); analysis and functional analysis (16); probability and statistics (5); computer science and numerical analysis (6); applied mathematics (7); differential equations (3); convexity (6); Riemann surfaces (7). TOTAL 71.

Fellowship (10) 1800-2400 9/12 500/qtr.*
Teaching Fellowship (4) 3447-4152 9 500/qtr.*
Teaching Assistantship (43) 3447-4152 9 500/qtr.*

*Nonresident fee

University of California, Los Angeles

LOS ANGELES, CALIFORNIA 90024

C. Hopkins, Chairman
Department of Public Health

Applications must be filed by April 15, 1972

Ph.D. degrees awarded during last three years by field of specialization: probability and statistics (12). TOTAL 12.

Research Assistantship (2) 2500-4050 12 20 max.
Post Doctorate Trainee NIH (1) 6000 12
Trainee NIH (19) 2400-2800 12 payable

University of California, Riverside

RIVERSIDE, CALIFORNIA 92502

John de Pillis, Chairman
Department of Mathematics

Applications must be filed by February 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (2); geometry and topology (3); analysis and functional analysis (4); probability and statistics (2); applied mathematics (3); harmonic analysis (2); numerical analysis (1); approximation theory (1). TOTAL 18.

Fellowship (7) 2400-3660 12
Teaching Fellowship (5) 3447 9
Teaching Assistantship (15) 3447 9 4-5 Teaching

University of California, San Diego

LA JOLLA, CALIFORNIA 92037

Jacob Korevaar, Chairman
Department of Mathematics

Applications must be filed by February 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (1); analysis and functional analysis (11); probability and statistics (2); computer science and numerical analysis (1); applied mathematics (1); control theory (1). TOTAL 17.

Fellowship (5) 2400-2800 12
Teaching Assistantship (36) 3447 9 half-time Teaching
Research Assistantship (8) 3355 11 half-time
Scholarship (5) Fees and/or Tuition

*Fees are $226 per quarter plus nonresident tuition of $500 per quarter.

1132
University of California, Santa Barbara

SANTA BARBARA, CALIFORNIA 93106
David L. Outcalt, Chairman
Department of Mathematics
Applications must be filed by March 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (9); geometry and topology (2); analysis and functional analysis (7). TOTAL 18.

<table>
<thead>
<tr>
<th>Type</th>
<th>Stipend (dollars)</th>
<th>Tuition (dollars)</th>
<th>Service Required (hours per week)</th>
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*Out-of-state

University of California, Santa Cruz

SANTA CRUZ, CALIFORNIA 95060
Al Kelley, Chairman
Department of Mathematics
Applications must be filed by February 1, 1972

Ph.D. program started 1969-1970

Colorado State University

FORT COLLINS, COLORADO 80521
E. R. Deal, Chairman
Mathematics Section
Applications must be filed by March 15, 1972

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (1); analysis and functional analysis (2); applied mathematics (1). TOTAL 4.

<table>
<thead>
<tr>
<th>Type</th>
<th>Stipend (dollars)</th>
<th>Tuition (dollars)</th>
<th>Service Required (hours per week)</th>
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<td>Teaching Assistantship (12)</td>
<td>2400-3600</td>
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<td>Research Assistantship (2)</td>
<td>2400-4200</td>
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<td>Scholarship (4)</td>
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Colorado State University

FORT COLLINS, COLORADO 80521
Franklin A. Graybill, Chairman
Department of Statistics
Applications must be filed by March 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: probability and statistics (14). TOTAL 14.

<table>
<thead>
<tr>
<th>Type</th>
<th>Stipend (dollars)</th>
<th>Tuition (dollars)</th>
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<td>57 fees 20 Research or Consulting</td>
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University of Colorado

BOULDER, COLORADO 80302

Albert T. Lundell, Chairman
Department of Mathematics

Applications must be filed by February 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (4); geometry and topology (2); analysis and functional analysis (9); probability and statistics (1); applied mathematics (2). TOTAL 18.

Fellowship (11) 680-2800 12
Teaching Assistantship (68) 2800 9 6-9 Teaching
Research Assistantship (5)

University of Colorado

BOULDER, COLORADO 80302

Lloyd D. Fosdick, Chairman
Department of Computer Science

The Department of Computer Science's proposal for a Ph.D. program was just approved by the Colorado Commission on Higher Education, Fall, 1971.

University of Denver

DENVER, COLORADO 80210

H. Greenberg, Chairman
Department of Mathematics

Applications must be filed by March 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: applied mathematics (1). TOTAL 1.

Teaching Assistantship (14) 2500-2900 9 10 Teaching
Research Assistantship (5) 3800-4400 12 10 Research
Scholarship (3) 1250-2500 9 2500

CONNECTICUT

Central Connecticut State College

NEW BRITAIN, CONNECTICUT 06050

Richard L. Menzer, Director
Division of Mathematics
Applications must be filed by May 1, 1972

Teaching Assistantship (2)* 2000 9 payable 6 Teaching

*One assistantship each in the Department of Applied Mathematics and the Department of Theoretical Mathematics.

University of Bridgeport

BRIDGEPORT, CONNECTICUT 06602

H. Margaret Elliott, Chairman
Department of Mathematics
Applications must be filed by April 1, 1972

Teaching Assistantship (2) 2000- 12 6 Teaching or equivalent
Resident Assistantship *

*Tuition, room and board, and a small stipend

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<th>TYPE OF FINANCIAL ASSISTANCE</th>
<th>STIPEND AMOUNT</th>
<th>STIPEND 9 OR 12 MONTHS</th>
<th>TUITION IF NOT INCLUDED IN STIPEND (Dollars)</th>
<th>SERVICE REQUIRED HOURS PER WEEK</th>
<th>TYPE OF SERVICE</th>
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<td>payable</td>
<td>6</td>
<td>Teaching</td>
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<td>Resident Assistantship</td>
<td>*</td>
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<td>6</td>
<td>Resident Assistant for dormitory</td>
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</table>
**University of Connecticut**

STORRS, CONNECTICUT 06268

E. S. Wolk, Head

Department of Mathematics

Applications must be filed by April 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (2); geometry and topology (2); logic (1); analysis and functional analysis (1). TOTAL 6.

<table>
<thead>
<tr>
<th>Type of Assistance</th>
<th>Stipend</th>
<th>Tuition</th>
<th>Service Required</th>
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<td>Fellowship (4)</td>
<td>2400-3000</td>
<td>640*</td>
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<td>Teaching Fellowship (10)</td>
<td>3105-3975</td>
<td>640*</td>
<td>9</td>
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<td>Teaching Assistantship (14)</td>
<td>3105-3975</td>
<td>640*</td>
<td>4-6</td>
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<td>Research Assistantship (2)</td>
<td>3105-3975</td>
<td>640*</td>
<td>varies</td>
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</table>

*Includes general university fee; $1140 including fee for out-of-state students

**University of Connecticut**

STORRS, CONNECTICUT 06268

G. E. Noether, Head

Department of Statistics

Applications must be filed by March 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (11). TOTAL 11.

<table>
<thead>
<tr>
<th>Type of Assistance</th>
<th>Stipend</th>
<th>Tuition</th>
<th>Service Required</th>
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<tr>
<td>Fellowship (4)</td>
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<td>Teaching Fellowship (4)</td>
<td>2700-3130</td>
<td>640*</td>
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<td>2910-3750</td>
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*Includes general university fee; $1140 including fee for out-of-state students

**Wesleyan University**

MIDDLETOWN, CONNECTICUT 06457

James D. Reid, Chairman

Department of Mathematics

Applications must be filed by March 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: geometry and topology (5); analysis and functional analysis (2). TOTAL 7.

<table>
<thead>
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<th>Type of Assistance</th>
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<td>Fellowship (2)</td>
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<td>Quiz section and/or Paper</td>
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<td>Teaching Assistantship (12)</td>
<td>2450-2800*</td>
<td>≤ 5</td>
<td>grading</td>
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*Dependency allowances, and summer stipends, are frequently available upon request.

**Yale University**

NEW HAVEN, CONNECTICUT 06520

G. D. Mostow, Chairman

Department of Mathematics

Applications must be filed by January 20, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (14); geometry and topology (4); logic (3); analysis and functional analysis (6); topological dynamics (4). TOTAL 33.

<table>
<thead>
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<th>Type of Assistance</th>
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<td>Fellowship (10)</td>
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<td>Research Assistantship (11)*</td>
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<td>NSF Traineeship (2)</td>
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*Not normally awarded to first year students.

**Students do not derive main support from teaching; however, students beyond the first year may earn between $500 and $1000 for grading, assisting, or teaching.
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<th>TYPE</th>
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<td>amount</td>
<td>if not included</td>
<td>hours per week</td>
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<td>in dollars</td>
<td>in stipend (dollars)</td>
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<td></td>
<td>9 or 12 months</td>
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<td>type of service</td>
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<td>(with number anticipated in 1972-1973)</td>
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**Yale University**

NEW HAVEN, CONNECTICUT 06520
Peter Weiner, Chairman
Department of Computer Science

Fellowship (8) 2900-4700 2900

**Yale University**

NEW HAVEN, CONNECTICUT 06520
Leonard J. Savage, Chairman
Department of Statistics

Applications must be filed by January 20, 1972

Ph.D. degrees awarded during last three years by field of specialization: probability and statistics (3). TOTAL 3.

Fellowship (14) 0-2800 12
Scholarship (2) 2000-2600 12

**DELWARE**

**University of Delaware**

NEWARK, DELAWARE 19711
Willard E. Baxter, Chairman
Department of Mathematics

Applications must be filed by March 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (1); analysis and functional analysis (6); applied mathematics (1). TOTAL 8.

Fellowship 2400-3400 12
Teaching Assistantship 2500-3000 9
Research Assistantship 3000-4200 12

*$1100 nonresident.

**DISTRICT OF COLUMBIA**

**American University**

WASHINGTON, D.C. 20016
Walter W. Jacobs, Chairman
Department of Mathematics and Statistics

Applications must be filed by February 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: probability and statistics (2). TOTAL 2.

Fellowship (3) 3000 9 24 0
Teaching Assistantship (9) 3000 9 24 15
Scholarship (1) 3000 9 24 0
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<td>amount in dollars</td>
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<td>in stipend (dollars)</td>
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<td>type of service</td>
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</table>

**Catholic University of America**

WASHINGTON, D.C. 20017

Gustav B. Hensel, Chairman
Department of Mathematics

Applications must be filed by February 15, 1972

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (1); analysis and functional analysis (9); probability and statistics (8); computer science and numerical analysis (1). TOTAL 19.

| Fellowship (1) | 2400–2800 | 9–12 |
| Teaching Assistantship (7) | 2400 | 9 |
| Scholarship (4) | one half tuition |

**Georgetown University**

WASHINGTON, D. C. 20007

Geraldo S. S. Avila, Chairman
Department of Mathematics

Applications must be filed by February 15, 1972

Ph.D. degrees awarded during last three years by field of specialization: analysis and functional analysis (5). TOTAL 5.

| Fellowship (1) | 2600–3200 | 9 |
| Teaching Fellowship (9) | 2600–3000 | 10–12 Teaching |
| Computer Center (1) | 2600–3000 | 10 |

**George Washington University**

WASHINGTON, D.C. 20006

T. P. G. Liverman, Chairman
Department of Mathematics

Applications must be filed by February 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (1); geometry and topology (2). TOTAL 3.

| Fellowship (1) | 2500 | 9 |
| Teaching Fellowship (6) | 2800 | 9 |

**George Washington University**

WASHINGTON, D.C. 20006

S. Kullback, Chairman
Department of Statistics

Applications must be filed by February 15, 1972

Ph.D. degrees awarded during last three years by field of specialization: probability and statistics (14). TOTAL 14.

| Teaching Fellowship (5) | 2400–2800 | 9 |
| Research Assistantship (5) | 3600 | 12 |

*Halftime during academic year; fulltime during summer.

**Howard University**

WASHINGTON, D.C. 20001

Horace Komm, Chairman
Department of Mathematics

Applications must be filed by August 1, 1972

| Graduate Assistantship (3-4) | 3638 |

NUMBER OF DEGREES AWARDED IN 1971

Baccalaureate degrees by institution 528
Baccalaureate degrees by department 6
Master's degrees by department 18

Baccalaureate degrees by institution 468
Baccalaureate degrees by department 8
Master's degrees by department 3

Baccalaureate degrees by institution 1224
Baccalaureate degrees by department 5
Master's degrees by department 3

Baccalaureate degrees by institution 1224
Baccalaureate degrees by department 2
Master's degrees by department 13

Baccalaureate degrees by institution 1185
Baccalaureate degrees by department 20
Master's degrees by department 7


**FLORIDA**

**Florida Atlantic University**

BOCA RATON, FLORIDA 33432

John M. Freeman, Chairman
Department of Mathematics

Applications must be filed by April 1, 1972*

<table>
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<th>TYPE</th>
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<td>2000-3000</td>
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*Late applications will be accepted

**Florida Institute of Technology**

MELBOURNE, FLORIDA 32901

D. R. Clutterham, Head
Department of Mathematical Sciences

Applications must be filed by March 15, 1972

<table>
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<th>TYPE</th>
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**Florida State University**

TALLAHASSEE, FLORIDA 32306

O. G. Harrold, Chairman
Department of Mathematics

Applications must be filed by February 1, 1972

<table>
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<th>TYPE</th>
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<td>Research</td>
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<td>240/qtr.</td>
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*Plus $350 nonresident tuition unless waived

**Florida State University**

TALLAHASSEE, FLORIDA 32306

Ralph A. Bradley, Head
Department of Statistics

Applications must be filed by February 1, 1972

<table>
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<th>TYPE</th>
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*Some fellowships and traineeships have additional dependency allowances
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<tr>
<td>University of Florida</td>
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<td>Applications must be filed by February 15, 1972*</td>
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</table>

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (7); geometry and topology (6); analysis and functional analysis (2); computer science and numerical analysis (3); applied mathematics (1). TOTAL 18.

Fellowship (10) 2400-3500 9-12 240 Nonteaching Duties
Teaching Assistantship (42) 2534-3780 9 240 15-20 Teaching
Research Assistantship (1) 2534 9 240 15-20 Research

*For fellowships, and any time for assistantships

University of Florida
GAINESVILLE, FLORIDA 32601
A. R. Bednarek, Chairman
Department of Mathematics
Applications must be filed by February 15, 1972*

Ph.D. degrees awarded during last three years by field of specialization: probability and statistics (4). TOTAL 4.

Teaching Assistantship (2) 2342-4200 12 250
Research Assistantship (12) 2342-4200 12 250

University of Miami
CORAL GABLES, FLORIDA 33124
William Mendenhall III, Chairman
Department of Statistics
Applications must be filed by March 1, 1972*

Ph.D. degrees awarded during the last three years by field of specialization: algebra and number theory (4); geometry and topology (2); analysis and functional analysis (1). TOTAL 7.

Fellowship (8) 2500-3000 9 6 Teaching
Teaching Assistantship (36) 2500-3000 9-12

*Acceptable at any time

University of South Florida
TAMPA, FLORIDA 33620
J. S. Ratti, Chairman
Department of Mathematics
Applications must be filed by April 15, 1972

Teaching Fellowship (4) 3000-3600 9 240/qtr. 6 Teaching
Teaching Assistantship (26) 3000-3600 9 240/qtr. 6 Teaching

University of West Florida
PENSACOLA, FLORIDA 32504
Robert E. Lee, Acting Chairman
Department of Mathematics and Statistics
Applications must be filed by May 1, 1972

Fellowship (4) 240 9-12

The graduate program will be beginning in 1972-1973.

1139
Emory University

ATLANTA, GEORGIA 30322
Trevor Evans, Chairman
Department of Mathematics
Applications must be filed by February 15, 1972

Ph. D. degrees awarded during the last three years by field of specialization: algebra and number theory (6); geometry and topology (3); analysis and functional analysis (5). TOTAL 14.

Fellowship (8) 2000-2500 9 or 12
Teaching Assistantship (15) 2150-4500 9 4-8 Teaching

Georgia Institute of Technology

ATLANTA, GEORGIA 30332
John D. Neff, Acting Director
Department of Mathematics
Applications must be filed by March 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (1); geometry and topology (2); analysis and functional analysis (2); probability and statistics (1); applied mathematics (2); ordinary differential equations (2). TOTAL 10.

Fellowship (3) 3000 12
Teaching Assistantship (35) 2550-4800 9 504 5-10 Teaching

Georgia Institute of Technology

ATLANTA, GEORGIA 30332
Vladimir Slamecka, Director
Department of Information and Computer Science
Applications must be filed by March 15, 1972*

Ph. D. degrees awarded during the last three years by field of specialization: computer science and numerical analysis (3). TOTAL 3.

Teaching Assistantship (8) 2800-3666 12 payable 13*** Teaching
Research Assistantship (12) 2800-3666 12 payable 13*** Research
Traineeship ** (7) 2400-2900 12 payable

* For consideration for financial aid
** Biomedical Information/Computer Science
*** Appointments normally made on a one-third time basis

Georgia Southern College

STATESBORO, GEORGIA 30458
D. Earl Lavender, Head
Department of Mathematics

Teaching Assistantship (5) 1900-2100 9 110 5 Teaching
Georgia State University

ATLANTA, GEORGIA 30303
Jan List Boal, Chairman
Department of Mathematics
Applications must be filed by September 1, 1972
Graduate Assistants (3) 1800 9

NUMBER OF DEGREES AWARDED IN 1971
Baccalaureate degrees by institution 1196
Baccalaureate degrees by department 64
Master's degrees by department 8

University of Georgia

ATHENS, GEORGIA 30602
J. G. Horne, Head
Department of Mathematics
Applications must be filed by February 15, 1972
Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (1); geometry and topology (7); analysis and functional analysis (2); applied mathematics (1); topological algebra (1). TOTAL 12.

Teaching Assistantship (25) 2700-4200 9 159/qtr. 5-8
Research Assistantship (15) 2500-3400 9-12 159/qtr. 12

Valdosta State College

VALDOSTA, GEORGIA 31601
D. L. Duncan, Head
Department of Mathematics

Teaching Assistantship (1) 2500 9 15-20 Teaching

West Georgia College

CARROLLTON, GEORGIA 30117
C. R. Pittman, Head
Department of Mathematics
Applications must be filed by March 15, 1972
Teaching Assistantship (5) 1950 9 payable 5 Teaching

University of Hawaii

HONOLULU, HAWAII 96822
H. S. Bear, Chairman
Department of Mathematics
Applications must be filed by March 1, 1972, for fall;
September 1, 1972, for spring
Ph. D. degrees awarded during last three years by field of specialization: analysis and functional analysis (1). TOTAL 1.

Teaching Assistantship (16) 3708-4308 9 20
**IDaho State University**

POCATELLO, IDAHO 83201  
John Hilzman, Chairman  
Department of Mathematics  
Applications must be filed by March 15, 1972

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**University of Idaho**

MOSCOW, IDAHO 83843  
Howard E. Campbell, Chairman  
Department of Mathematics  
Applications must be filed by February 15, 1972

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (3); geometry and topology (1); probability and statistics (2). TOTAL 5.

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**DePaul University**

CHICAGO, ILLINOIS 60614  
Michael Wichman, Acting Chairman  
Department of Mathematics

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</table>

**Ph.D. Program at Hawaii**

The University of Hawaii Mathematics Department has a young and active faculty of forty-three members. The Ph.D. program is new, and the small number of graduate students makes for an extremely favorable student/faculty ratio. Teaching Assistantships are available starting at $3708. Female applications are encouraged. For detailed information write to

Tom S. Pitcher, Graduate Chairman  
Department of Mathematics  
UNIVERSITY OF HAWAII  
Honolulu, Hawaii 96822

An Equal Opportunity Employer
### Eastern Illinois University
CHARLESTON, ILLINOIS 61920  
Alphonso J. DiPietro, Head  
Department of Mathematics  
Applications must be filed by March 1, 1972

<table>
<thead>
<tr>
<th>Type of Financial Assistance</th>
<th>Stipend Amount</th>
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NUMBER OF DEGREES AWARDED IN 1971  
Baccalaureate degrees by institution 900  
Baccalaureate degrees by department 70  
Master's degrees by department 30

### Illinois Institute of Technology
CHICAGO, ILLINOIS 60616  
Haim Reingold, Chairman  
Department of Mathematics  
Applications must be filed by April 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (10); geometry and topology (2); analysis and functional analysis (5); probability and statistics (1); applied mathematics (4). TOTAL 22.

<table>
<thead>
<tr>
<th>Type of Financial Assistance</th>
<th>Stipend Amount</th>
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<td>2100-2700</td>
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<td>2100-2900</td>
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### Illinois Institute of Technology
CHICAGO, ILLINOIS 60616  
Robert G. Tobey, Chairman  
Department of Computer Science  
Applications must be filed by March 1, 1972

Fellowship (2)  
Teaching Assistantship (16)

NUMBER OF DEGREES AWARDED IN 1971  
Baccalaureate degrees by department 1  
Master's degrees by department 8

### Illinois State University
NORMAL, ILLINOIS 61761  
Robert K. Ritt, Head  
Department of Mathematics

Teaching Assistantship (15)  

NUMBER OF DEGREES AWARDED IN 1971  
Baccalaureate degrees by institution 2346  
Baccalaureate degrees by department 111  
Master's degrees by department 22

12 Teaching and Assisting

### Loyola University
CHICAGO, ILLINOIS 60626  
J. Richard VandeVelde, Chairman  
Department of Mathematics  
Applications must be filed by April 15, 1972

Fellowship (4)  

NUMBER OF DEGREES AWARDED IN 1971  
Baccalaureate degrees by institution 640  
Baccalaureate degrees by department 3  
Master's degrees by department 3

6-10  

### Northeastern Illinois University
CHICAGO, ILLINOIS 60625  
Louis M. Weiner, Chairman  
Department of Mathematics

No fellowships, assistantships, or scholarships available due to budget cuts.
Northern Illinois University

DEKALB, ILLINOIS 60115
D. R. Ostberg, Chairman
Department of Mathematics
Applications must be filed by July 1, 1972*

<table>
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<td>Summer Assistantship (30)</td>
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*May 1, 1972 for summer.

Northwestern University

Evanston, Illinois 60201
R. P. Boas, Chairman
Department of Mathematics
Applications must be filed by February 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (11); geometry and topology (5); analysis and functional analysis (10); probability and statistics (6); applied mathematics (2). TOTAL 34.

<table>
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<th>Type of Service</th>
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<td>Teaching Assistantship (28)</td>
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<td>Research Assistantship (4)</td>
<td>2855-4595</td>
<td>9 12</td>
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Northwestern University

Evanston, Illinois 60201
Arthur Wouk, Chairman
Committee on Applied Mathematics
Applications must be filed by April 15, 1972

Ph.D. degrees awarded during last three years by field of specialization: probability and statistics (2); computer science and numerical analysis (3); applied mathematics (10). TOTAL 15.

<table>
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<th>Type of Service</th>
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Southern Illinois University

Carbondale, Illinois 62901
Neal E. Foland, Chairman
Department of Mathematics
Applications must be filed by February 1, 1972*

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (2); geometry and topology (1); analysis and functional analysis (2); differential equations (4). TOTAL 9.

<table>
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<th>Type of Service</th>
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*Late applications will be considered
**Fee per term; some optional
Southern Illinois University - Edwardsville

EDWARDVILLE, ILLINOIS 62025
Earl E. Lazerson, Acting Chairman
Faculty of Mathematical Studies

Teaching Assistantship (24)
Research Assistantship (4)

University of Chicago

CHICAGO, ILLINOIS 60637
Alberto P. Calderon, Chairman
Department of Mathematics

Applications must be filed by February 1, 1972*

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (31); geometry and topology (2); analysis and functional analysis (18); applied mathematics (1). TOTAL 52.

Fellowship (9) 200/mo. 9
Teaching Assistantship (10) 200/mo. 9 5
Research Assistantship (12) 200/mo. 9-12 varies Research

*January 1, 1972, for foreign applicants.

University of Chicago

CHICAGO, ILLINOIS 60637
Robert L. Ashenhurst, Chairman
Department of Information Sciences

Applications must be filed by February 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (2). TOTAL 2.

Fellowship 3000 9-12
Teaching Assistantship (4) 2700 9 6 Teaching
Research Assistantship (7) 3825 9 up to 20 Research
Scholarship (2) 2625 9

University of Chicago

CHICAGO, ILLINOIS 60637
William Kruskal, Chairman
Department of Statistics

Applications must be filed by January 1, 1972*; February 1, 1972**

Ph.D. degrees awarded during the last three years by field of specialization: probability and statistics (8). TOTAL 8.

Fellowship (9) 1800-5000 9 5 Research
Teaching Assistantship (5) 1800-2700 9 5 Teaching
Research Assistantship (5) 1800-2700 9 5 Research

*For foreign
**For domestic
University of Illinois at Chicago Circle

CHICAGO, ILLINOIS 60680

Joseph Landin, Head
Department of Mathematics

Applications must be filed by February 1, 1972, for fellowships; August 15, 1972, for assistantships

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (1); logic (1). TOTAL 2.

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University of Illinois at Urbana-Champaign

URBANA, ILLINOIS 61801

P. T. Bateman, Head
Department of Mathematics

Applications must be filed by February 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (25); geometry and topology (11); logic (6); analysis and functional analysis (22); probability and statistics (10); computer science and numerical analysis (6); applied mathematics (8). TOTAL 85.

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<td>Tuition Waiver (5)</td>
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<td>Teacher Trainee Fellowship (35)</td>
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Western Illinois University

MACOMB, ILLINOIS 61455

A. J. Shryock, Chairman
Department of Mathematics

Applications must be filed by April 1, 1972

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THE UNIVERSITY OF ILLINOIS AT URBANA—CHAMPAIGN

invites undergraduates to apply for teaching assistantships and fellowships in the Department of Mathematics. At the start of the Fall Semester 1971, there were fifty fellows and one hundred and sixty assistants in the Department. Through a renowned faculty of over one hundred professors the Department of Mathematics offers one of the broadest programs of mathematical studies available in the United States. Utilizing seven degree programs within the Department and others in cooperation with allied departments of the University, students are able to study in all branches of mathematics and all branches of applied mathematics. For information and application materials write to: Professor James W. Armstrong, Graduate Supervisor
Department of Mathematics
University of Illinois
Urbana, Illinois 61801

Advisors and counselors of undergraduates are invited to write to the same address for information about our courses and degree programs.
Indiana University

BLOOMINGTON, INDIANA 47401
William P. Ziemer, Acting Chairman
Department of Mathematics
Applications must be filed by February 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (9); geometry and topology (1); analysis and functional analysis (11); probability and statistics (1); computer science and numerical analysis (1); applied mathematics (1). TOTAL 24.

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<th>Fellowship (I)</th>
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<td>Summer Fellowship (20)</td>
<td>400</td>
<td>8 wks.</td>
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*May provide exemption from all fees
**May be accompanied by a tuition scholarship which pays all but $73 for usual course load
***Participation in a seminar to provide insight into learning and teaching undergraduate mathematics

Indiana University

BLOOMINGTON, INDIANA 47401
Franklin Prosser, Acting Chairman
Department of Computer Science
Applications must be filed by February 15, 1972

<table>
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Purdue University

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<td>if not included in stipend (dollars)</td>
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<td>in dollars</td>
<td>months</td>
<td>in stipend (dollars)</td>
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Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (10); geometry and topology (1); logic (3); analysis and functional analysis (20); applied mathematics (9). TOTAL 43.

Fellowship (10) 2400-4000 12 700/yr.*
Teaching Assistantship (113) 3000-3600 10 700/yr.* 6 Teaching
Research Assistantship (10) 2200-3000 10 700/yr.* 20 Scheduled advising
Administrative (1) 3000 10 700/yr.*

*$120 for graduate assistants and graduate instructors

Purdue University

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<td>Baccalaureate degrees by department 176</td>
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<td>Master's degrees by department 55</td>
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Ph.D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (15). TOTAL 15.

Fellowship (10) 2400-2800 10-12 60/sem. 10-15 Teaching, Grading
Teaching Assistantship (35) 3000-3600 10 60/sem. 10-20 Research
Research Assistantship (35) 3000-3600 10 60/sem. 10-20 Research
Black Fellowship (2) 3600-4200 10-12

Purdue University

<table>
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<td>Master's degrees by department 25</td>
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Ph.D. degrees awarded during last three years by field of specialization: probability and statistics (21). TOTAL 21.

Fellowship (6-9) 3000 10 60/sem.
Teaching Assistantship (30) 3000-3600 10 60/sem. 6-10 Teaching
Research Assistantship (6) 3000 10 60/sem. 10 Research

Purdue University, Calumet Campus

<table>
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<td>Baccalaureate degrees by department 13</td>
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<td>Master's degrees by department 8</td>
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NSF In-service (80) * 9
NSF In-service (60) * Summer

*Books, travel, remission of fees
University of Notre Dame

NOTRE DAME, INDIANA 46556
O. T. O'Meara, Chairman
Department of Mathematics
Applications must be filed by February 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (23); geometry and topology (6); logic (4); analysis and functional analysis (3). TOTAL 36.

Teaching Fellowship (10) 2400–4400 9–12 2 Teaching
Teaching Assistantship (40) 2700–3000 9 4 Teaching

The Department of Mathematics at St. Mary's College is included.

Drake University

DES MOINES, IOWA 50311
B. E. Gillam, Chairman
Department of Mathematics
Applications must be filed by March 1, 1972

Teaching Assistantship (5) 2100–2300 9 8

Iowa State University

AMES, IOWA 50010
Wilfred E. Barnes, Head
Department of Mathematics
Applications must be filed by February 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (12). TOTAL 12.

Fellowship (1) 2700–3700 12
Teaching Assistantship (12) 2790–3000 9 125 22 Teaching
Research Assistantship (17) 2700–3600 9–12 125 22 Research
Iowa State University

AMES, IOWA 50010
T. A. Bancroft, Head
Department of Statistics
Applications must be filed by April 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (32).

<table>
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<th>TYPE</th>
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TOTAL 32.

Fellowship (5) 2400-2800 12
Teaching Assistantship (9) 2970-3150 9 120/qtr. 22 Teaching
Research Assistantship (10) 2970-3970 12 120/qtr. 22 Research

University of Iowa

IOWA CITY, IOWA 52240
Richard R. Goldberg, Chairman
Department of Mathematics
Applications must be filed by April 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (11); geometry and topology (4); logic (2); analysis and functional analysis (4); mathematics education (1). TOTAL 22.

<table>
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<th>SERVICE REQUIRED</th>
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<td>0.00</td>
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TOTAL 22.

Fellowship (5) 2200-3600 9
Teaching Fellowship (4) 3750-4250 12 6-20* Teaching
Teaching Assistantship (35) 3400-4000 9 710 6
Research Assistantship (2) 3400-4000 9 710 20

*Free on Fellowship year

University of Iowa

IOWA CITY, IOWA 52240
Gerard P. Weeg, Chairman
Department of Computer Science
Applications must be filed by February, 1972

Ph. D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (5). TOTAL 5.

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<th>TYPE</th>
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<th>TUITION</th>
<th>SERVICE REQUIRED</th>
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TOTAL 5.

Fellowship (2) 12
Teaching Fellowship (3) 4000-4200 12 *
Teaching Assistantship (10) 3600 9 *
Research Assistantship (12) 3600 9-12 *

*Out-of-state fees waived

University of Iowa

IOWA CITY, IOWA 52240
Robert V. Hogg, Chairman
Department of Statistics
Applications must be filed by February 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (8). TOTAL 8.

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TOTAL 8.

Fellowship (6) 2200-3600 9
Teaching Fellowship (4) 3750-4250 12 6-20* Teaching
Teaching Assistantship (13) 3400-4000 9 710 6
Research Assistantship (9) 3400-4000 9 710 20

*Free on Fellowship year
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**KANSAS**

**Fort Hays Kansas State College**

HAYS, KANSAS 67601  
W. Toalson, Chairman  
Department of Mathematics

Applications must be filed by March 1, 1972

| Fellowship (2) | 650 | 9 | 188.50 | 10 | Teaching, etc. |
| Teaching Assistantship (2) | 2000 | 9 | 188.50 | 10 | Teaching, etc. |

**Kansas State College of Pittsburg**

PITTSBURG, KANSAS 66762  
Helen F. Kriegsman, Chairman  
Department of Mathematics

Applications must be filed by March 1, 1972

| Teaching Assistantship (6) | 1800-1935 | 9 | 191* | 6 | Teaching |

*$388 nonresident

**Kansas State Teachers College**

EMPORIA, KANSAS 66801  
M. P. Emerson, Head  
Department of Mathematics

Applications must be filed by April 1, 1972*

| Teaching Assistantship (3) | 800-2400 | 9 | 200/sem. | 4-12 | Teaching |

*Late applications will be considered.

**Kansas State University**

MANHATTAN, KANSAS 66502  
John E. Maxfield, Head  
Department of Mathematics

Applications must be filed by April 15, 1972

| Teaching Fellowship (6) | 3000 | 12 | 356/yr. | 4 | Teaching |
| Teaching Assistantship (23) | 2340-2925 | 9 | 356/yr. | 4 | Teaching |
| Research Assistantship (1) | 2340-2925 | 9 | 356/yr. | 4 | Research |

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (4); geometry and topology (3); logic (2); analysis and functional analysis (2). TOTAL 11.

**Kansas State University**

MANHATTAN, KANSAS 66502  
H. Sackman, Head  
Department of Computer Science

Applications must be filed by March 10, 1972

| Teaching Assistantship (10) | 2475-2825 | 9 | In-State | 6-10 | Teaching |

1151
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Murray State University

MURRAY, KENTUCKY 42071
Harold G. Robertson, Chairman
Department of Mathematics
Applications must be filed by February 15, 1972

Teaching Assistantship (5)

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University of Kentucky

LEXINGTON, KENTUCKY 40506
James H. Wells, Chairman
Department of Mathematics
Applications must be filed by February 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (8); geometry and topology (11); analysis and functional analysis (19); applied mathematics (2). TOTAL 40.

Fellowship (12)
Teaching Assistantship (60)
University and Departmental Fellowship (10)

| NUMBER OF DEGREES AWARDED IN 1971 |         |         |  |  |  |  |  |  |
|-----------------------------------|---------|---------|  |  |  |  |  |  |
| Baccalaureate degrees by institution | 2400 |  |  |  |  |  |  |
| Baccalaureate degree by department | 30 |  |  |  |  |  |  |
| Master’s degrees by department | 13 |  |  |  |  |  |  |

University of Kentucky

LEXINGTON, KENTUCKY 40506
Thaddeus B. Curtz, Chairman
Department of Computer Science
Applications must be filed by April 1, 1972

Teaching Assistantship (3-5)

| NUMBER OF DEGREES AWARDED IN 1971 |         |         |  |  |  |  |  |  |
|-----------------------------------|---------|---------|  |  |  |  |  |  |
| Baccalaureate degrees by institution | 2400 |  |  |  |  |  |  |
| Baccalaureate degree by department | 16 |  |  |  |  |  |  |

University of Kentucky

LEXINGTON, KENTUCKY 40506
R. L. Anderson, Chairman
Department of Statistics
Applications must be filed by February 1, 1972, for fellowships; April 1, 1972, for assistantships

Teaching Assistantship (14)
Research Assistantship (1)
Lecturer (2)

| NUMBER OF DEGREES AWARDED IN 1971 |         |         |  |  |  |  |  |  |
|-----------------------------------|---------|---------|  |  |  |  |  |  |
| Baccalaureate degrees by institution | 2400 |  |  |  |  |  |  |
| Master’s degrees by department | 5 |  |  |  |  |  |  |

University of Louisville

LOUISVILLE, KENTUCKY 40208
Roger H. Geeslin, Chairman
Department of Mathematics
Applications must be filed by March 15, 1972

Teaching Assistantship (6)

<p>| NUMBER OF DEGREES AWARDED IN 1971 |         |         |  |  |  |  |  |  |
|-----------------------------------|---------|---------|  |  |  |  |  |  |
| Baccalaureate degrees by institution | 1011 |  |  |  |  |  |  |
| Baccalaureate degree by department | 29 |  |  |  |  |  |  |
| Master’s degrees by department | 11 |  |  |  |  |  |  |</p>
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<td>Bart Childs, Chairman</td>
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| Western Kentucky University | | | | | |
| BOWLING GREEN, KENTUCKY 42101 | | | | | |
| Robert C. Bueker, Chairman | | | | | |
| Department of Mathematics | | | | | |
| Applications must be filed by April 1, 1972 | | | | | |
| Teaching Assistantship (8) | 2200-2700 | 9 | | 150/sem. | 10 | Teaching, Tutorials |

| LOUISIANA | | | | | |
| Louisiana State University | | | | | |
| BATON ROUGE, LOUISIANA 70803 | | | | | |
| L. I. Wade, Head | | | | | |
| Department of Mathematics | | | | | |
| Applications must be filed by March 1, 1972 | | | | | |
| Fellowship (4) | 2400-2800 | 9 | | | | |
| Teaching Assistantship (40) | 3200 | 9 | | 110 | 6 | Teaching |
| Research Assistantship (2) | 2800 | 9 | | | | |
| Scholarship (1) | | | | | | |

| Louisiana State University in New Orleans | | | | | |
| NEW ORLEANS, LOUISIANA 70122 | | | | | |
| Joe R. Foote, Chairman | | | | | |
| Department of Mathematics | | | | | |
| Applications must be filed by May 1, 1972 | | | | | |
| Teaching Assistantship (10) | 2400 | 9 | | 70 | 15 | Teaching |

| Louisiana Tech University | | | | | |
| RUSTON, LOUISIANA 71270 | | | | | |
| W. B. Temple, Head | | | | | |
| Department of Mathematics | | | | | |
| Applications must be filed by February 15, 1972 | | | | | |
| Teaching Assistantship (15) | 2400-4500 | 9 | | | | |

| NUMBER OF DEGREES AWARDED IN 1971 | | | | | |
| Baccalaureate degrees by department | 2 | | | | |
Loyola University

NEW ORLEANS, LOUISIANA 70118
R. T. McLean, Chairman
Department of Mathematics and Computer Science

EPDA HEW* (10) 2400–3000 9–12

*Pending grant approval

McNeese State University

LAKE CHARLES, LOUISIANA 70601
Patrick L. Ford, Head
Department of Mathematical Sciences
Applications must be filed by May 1, 1972, for fall semester; December 1, 1972, for spring semester

Teaching Assistantship (8) 1600–2400 9

Northeast Louisiana University

MONROE, LOUISIANA 71201
Richard D. Finley, Head
Department of Mathematics
Applications must be filed by March 15, 1972

Teaching Assistantship (20) 2400 9
Lab Assistantship (5) 2000 9

Southeastern Louisiana University

HAMMOND, LOUISIANA 70401
Robert C. Brown, Head
Department of Mathematics
Applications must be filed by March 15, 1972

Teaching Assistantship (5) 2400 9

LOUISIANA TECH UNIVERSITY

The Mathematics Department of Louisiana Tech University offers the B.S., M.S. and Ph.D. degrees.
The mathematics faculty, including Ph.D.’s in Analysis, Algebra, Geometry, Topology, Probability, and Statistics, is experienced, competent and personally interested in its students.
The Mathematics Department which is housed in a new building has a calculator laboratory furnished with new electronic desk calculators. Computer facilities consist of an IBM 1620 and an IBM 370 Mod 145.

Fifteen assistantships and part-time teaching jobs are available and range in pay from $2,400 to $4,500 for nine months. Apply by February 15 to W. B. Temple, Head, Department of Mathematics, Ruston, Louisiana, 71270.
Tulane University

NEW ORLEANS, LOUISIANA 70118

Frank D. Quigley, Chairman
Department of Mathematics
Applications must be filed by February 15, 1972

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (7); geometry and topology (7); analysis and functional analysis (9). TOTAL 23.

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University of Southwestern Louisiana

LAFAYETTE, LOUISIANA 70501

David R. Andrew, Head
Department of Mathematics
Applications must be filed by February 15, 1972

Ph.D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (1). TOTAL 1.

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University of Southwestern Louisiana

LAFAYETTE, LOUISIANA 70501

Barry Bateman, Head
Department of Computer Science
Applications must be filed by March 1, 1972, and November 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (1). TOTAL 1.

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MAINE

University of Maine at Orono

ORONO, MAINE 04473

John C. Mairhuber, Chairman
Department of Mathematics and Astronomy
Applications must be filed by April, 1972

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**MARYLAND**

**Johns Hopkins University**

Baltimore, Maryland 21218

J. H. Sampson, Chairman
Department of Mathematics

Applications must be filed by March 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (5); geometry and topology (1); analysis and functional analysis (4). TOTAL 10.

- Fellowship (3) 2400-2600 9
- Teaching Assistantship (31) 2400 9

**Johns Hopkins University**

Baltimore, Maryland 21205

Alan Ross, Chairman
Department of Biostatistics
School of Hygiene and Public Health

Applications must be filed by April 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (14). TOTAL 14.

- Fellowship (18) 2400-2800 12
- Scholarship (2) 2400-2800 12

**Johns Hopkins University**

Baltimore, Maryland 21218

Siegfried Schach, Acting Chairman
Department of Statistics

Applications must be filed by March 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (7). TOTAL 7.

- Fellowship (3) 3000 9
- Teaching Assistantship (2) 3000 9
- Research Assistantship (7) 3000 9

---

**University of Maryland Baltimore County**

Graduate Study in Applied Mathematics Leading to M.S. and Ph.D. Degrees

**FIELDS:** Real & Complex Analysis, Functional Analysis, Ordinary and Partial Differential Equations, Dynamical Systems, Control Theory, Fluid Dynamics, Numerical Analysis, Mathematical Physics.

**TEACHING ASSISTANTSHIPS:** At least $2,800 with Remission of Fees.

**APPLY TO:** Chairman, Graduate Committee
Division of Mathematics
University of Maryland Baltimore County
Baltimore, Maryland 21228
<table>
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<td>BALTIMORE, MARYLAND 21239</td>
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<td>W. R. Talbot, Chairman</td>
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| **University of Maryland**  |                           |                |                                             |                               |                |
| COLLEGE PARK, MARYLAND 20742|                           |                |                                             |                               |                |
| Adam Kleppner, Acting Chairman |                           |                |                                             |                               |                |
| Department of Mathematics   |                           |                |                                             |                               |                |
| Applications must be filed by March 1, 1972 | | | | | |
| Fellowship (25)             | 2400-4000                 | 9-12           | 38-48/sem.hr.                               | 2-9 Teaching or grading grants |                |
| Teaching Assistantship (130)| 2800-3300                 | 9              |                                             |                               |                |
| Research Assistantship (5)  | 3100-4700                 | 9-12           |                                             |                               |                |

| **University of Maryland**  |                           |                |                                             |                               |                |
| COLLEGE PARK, MARYLAND 20742|                           |                |                                             |                               |                |
| William F. Atchison, Director |                           |                |                                             |                               |                |
| Computer Science Center     |                           |                |                                             |                               |                |
| Applications must be filed by March 1, 1972 | | | | | |
| Teaching Assistantship (19) | 2800-3000                 | 9              | remitted                                    | 4-6 Teaching                  |                |
| Research Assistantship (6)  | 3400-3850                 | 9              | 38-48/sem.hr.                               |                               |                |

**MASSACHUSETTS**

| **Boston College**         |                           |                |                                             |                               |                |
| CHESTNUT HILL, MASSACHUSETTS 02167 | | | | | |
| Joseph A. Sullivan, Chairman |                           |                |                                             |                               |                |
| Department of Mathematics   |                           |                |                                             |                               |                |
| Applications must be filed by February 15, 1972 | | | | | |
| Teaching Fellowship (13)    | 2400-2600                 | 9              |                                             |                               |                |
| Teaching Assistantship (1)  | 2200                      | 9              |                                             |                               |                |
| Scholarship (3)             | 9                        |                |                                             |                               |                |

| **Boston University**       |                           |                |                                             |                               |                |
| BOSTON, MASSACHUSETTS 02215 |                           |                |                                             |                               |                |
| Robin E. Esch, Chairman     |                           |                |                                             |                               |                |
| Department of Mathematics   |                           |                |                                             |                               |                |
| Applications must be filed by February 1, 1972 | | | | | |
| Teaching Fellowship (20)    | 2800                      | 9              |                                             |                               |                |
| Assistantship (2)           | 9                        |                |                                             |                               |                |
Brandeis University

WALTHAM, MASSACHUSETTS 02154
Robert T. Seeley, Chairman
Department of Mathematics
Applications must be filed by February 1, 1972

Ph. D. degrees awarded during last three years: TOTAL 15.

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*Tuition

Clark University

WORCESTER, MASSACHUSETTS 01610
John F. Kennison, Chairman
Department of Mathematics
Applications must be filed by February 20, 1972

Ph. D. degrees awarded during last three years by field of specialization: analysis and functional analysis (1); category theory (2). TOTAL 3.

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*Teaching fellows may apply for Staff-Tuition Fellowship which pays most of tuition.

Harvard University

CAMBRIDGE, MASSACHUSETTS 02138
John T. Tate, Chairman
Department of Mathematics
Applications must be filed by January 10, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (5); geometry and topology (8); logic (3); analysis and functional analysis (7); computer science and numerical analysis (1); applied mathematics (1). TOTAL 25.

<table>
<thead>
<tr>
<th>TYPE</th>
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*The figures on financial aids are combined.
Harvard University

CAMBRIDGE, MASSACHUSETTS 02138

Arthur P. Dempster, Chairman
Department of Statistics

Applications must be filed by January 10, 1972

Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (11), TOTAL 11.

Students generally combine several sources of support including university fellowships, outside fellowships, teaching fellowships, research assistantships, outside teaching, outside consulting and research assisting.

Lowell Technological Institute

LOWELL, MASSACHUSETTS 01854

I. Jacob Weinberg, Head
Department of Mathematics

Applications must be filed by April 15, 1972

Teaching Assistantship (8) 3000 9 6 Teaching

Massachusetts Institute of Technology

CAMBRIDGE, MASSACHUSETTS 02139

Kenneth Hoffman, Head
Department of Mathematics

Applications must be filed by January 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (6); geometry and topology (12); logic (6); analysis and functional analysis (20); probability (1); computer science and numerical analysis (7); applied mathematics (11); combinatorial analysis (2); operations research (2). TOTAL 69.

Fellowship (38) 2700-3000 9 6 or Teaching
3600 12

Teaching Assistantship (45) 3165* 9 16 Grading papers

Research Assistantship (10) 5355* 9 2900 16

Traineeship (6) 2250 9
3000 12

*1971-1972 rates

Southeastern Massachusetts University

NORTH DARTMOUTH, MASSACHUSETTS 02747

Lawrence S. Kennison, Chairman
Department of Mathematics

Applications must be filed by June 15, 1972

Teaching Assistantship (4) 1000-3000 9 payable 5-10 Teaching

Tufts University

MEDFORD, MASSACHUSETTS 02155

James W. Schlesinger, Chairman
Department of Mathematics

Applications must be filed by March 15, 1972

NDEA Fellowship (1) 2400
Teaching Assistantship (5) 1200
Scholarship (7) 2850 20* Teaching and Preparation

*4 class contact hours weekly
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Eastern Michigan University

YPISILANTI, MICHIGAN 48197
Robert S. Pate, Head
Department of Mathematics
Applications must be filed by March 1, 1972

Teaching Fellowship (7)
3000–3300 9
340–505 18–20 Teaching

Michigan State University

EAST LANSING, MICHIGAN 48823
C. P. Wells, Chairman
Department of Mathematics
Applications must be filed by February 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (24); geometry and topology (21); analysis and functional analysis (21); computer science and numerical analysis (2); applied mathematics (2). TOTAL 70.

Fellowship (8)
2400–3300 12
Teaching Fellowship (4)
1000 3
Teaching Assistantship (108)
2900–4950 9
Research Assistantship** (19)
2826–2898 9
Scholarship (6)
Unknown

*In-state
**Second and third years

Michigan State University

EAST LANSING, MICHIGAN 48823
H. G. Hedges, Chairman
Department of Computer Science
Applications must be filed by March 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (1). TOTAL 1.

Teaching Assistantship (6)
3000–4000 9
Research Assistantship (6)
3000–4000 9
Programming Consultantship (6)
1500 9

*In-state

Michigan State University

EAST LANSING, MICHIGAN 48823
James Stapleton, Chairman
Department of Statistics and Probability
Applications must be filed by March 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (12). TOTAL 12.

Fellowship (7)
2400–3600 12
Teaching Assistantship (15)
3150–3500 9
Research Assistantship (2)
4200–4500 12

15/cr. * varies Teaching
15/cr. * 20 Research
15/cr. * 20 Research and Consulting
Northern Michigan University

MARQUETTE, MICHIGAN 49855
Donald D. Heikkinen, Head
Department of Mathematics
Applications must be filed by April 15, 1972

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Oakland University

ROCHESTER, MICHIGAN 48063
George F. Feeman, Acting Chairman
Department of Mathematics
Applications must be filed by April 1, 1972

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*Waived in most cases

University of Detroit

DETROIT, MICHIGAN 48221
Karl W. Folley, Chairman
Department of Mathematics
Applications must be filed by 8 weeks before term

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University of Michigan

ANN ARBOR, MICHIGAN 48104
James M. Kister, Chairman
Department of Mathematics
Applications must be filed by February 1, 1972

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<td>Other****(15)</td>
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*All types, including University, NSF, NDEA, State and Actuarial Science Fellowships. Some are available on a 12-month basis with a proportionally higher stipend.
**Approximately 25 of these fellowships will be combination appointments.
***Primarily for students in Actuarial Science.
****Primarily for students of certain minority groups.
University of Michigan

ANN ARBOR, MICHIGAN 48104
Richard G. Cornell, Chairman
Department of Biostatistics
School of Public Health
Applications deadline is open

Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (6). TOTAL 6.

<table>
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<td>Scholarship (1)</td>
<td>1740–3600</td>
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University of Michigan

ANN ARBOR, MICHIGAN 48104
John H. Holland, Acting Chairman
Department of Computer and Communications Sciences
Applications must be filed by February 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (32). TOTAL 32.

<table>
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<tr>
<th>Type</th>
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University of Michigan

ANN ARBOR, MICHIGAN 48104
W. A. Ericson, Chairman
Department of Statistics
Applications must be filed by February 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (3). TOTAL 3.

<table>
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<td>Teaching Fellowship (10)</td>
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<td>640–2240</td>
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Wayne State University

DETOIT, MICHIGAN 48202
Martin T. Wechsler, Chairman
Department of Mathematics
Applications must be filed by February 15, 1972

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (4); geometry and topology (1); analysis and functional analysis (6); probability and statistics (3). TOTAL 19.

<table>
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*Late applications considered
Western Michigan University

KALAMAZOO, MICHIGAN 49001
A. Bruce Clarke, Chairman
Department of Mathematics
Applications must be filed by March 1, 1972

Ph, D. degrees awarded during last three years by field of specialization: algebra and number theory (1); analysis and functional analysis (1); graph theory (1). TOTAL 3.

Fellowship (7)
Teaching Fellowship (5)
Teaching Assistantship (22)

*$24 per credit hour for Michigan residents

MINNESOTA

Bemidji State College

BEMIDJI, MINNESOTA 56601
W. Richard Slinkman, Chairman
Department of Mathematics and Computer Science
Applications must be filed by April 15, 1972

Teaching Assistantship (2)

*§ 9.50/credit hour, if Minnesota Resident; $19.50/credit hour, if nonresident, plus: $30.00 in fees, if registered for 9+ credits; $15.00 in fees, if registered for 8 or less credits

Mankato State College

MANKATO, MINNESOTA 56001
Francis C. Hatfield, Chairman
Department of Mathematics, Astronomy, and Computer Science
Applications must be filed by April 1, 1972

Teaching Assistantship (10)

St. Cloud State College

ST. CLOUD, MINNESOTA 56301
Alyn N. Dull, Chairman
Department of Mathematics
Applications must be filed by April 15, 1972

Teaching Assistantship (5)

*§ 9.50/credit hour for resident and $19.50/credit hour for nonresident
University of Minnesota

MINNEAPOLIS, MINNESOTA 55455

Johannes C. Nitsche, Head
Department of Mathematics

Applications must be filed by February 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (2); geometry and topology (6); logic (3); analysis and functional analysis (12); probability and statistics (4); partial differential equations and ordinary differential equations (8). TOTAL 34.

- Fellowship (17) 2000-4600** 9-12
- Teaching Fellowship (2) 3375* 9 576* 3 Teaching
- Teaching Assistantship (75) 3375* 9 576* 3-6 Teaching
- Research Assistantship (4) 3000-4500* 9-12 576* 24 Research
- Teaching Associate (20) 3780* 9 576* Teaching
- S.E.E.D. Assistantship *** (5) 2500-3000 9 576* 5 Teaching

**These represent current rates. Rates for 1972-1973 have yet to be decided.
***Teaching conceptual mathematics in inner-city elementary schools.

University of Minnesota

MINNEAPOLIS, MINNESOTA 55455

Marcus O. Kjelsberg, Acting Director
Biometry Division, School of Public Health

Applications must be filed by March 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: biometry (14). TOTAL 14.

- Fellowship (15) 2400-3600 12 payable
- Teaching Assistantship (5) 1687-3375 9 10-20
- Research Assistantship (3) 1600-3200 9 10-20

University of Minnesota

MINNEAPOLIS, MINNESOTA 55455

J. B. Rosen, Head
Department of Computer, Information and Control Sciences

Applications must be filed by February 15, 1972

Ph.D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (2). TOTAL 2.

- Fellowship (2) 2000-6000 12 15-20
- Teaching Fellowship (5) 2000-6000 12 15-20
- Teaching Assistantship (10) 4000 9 600 15-20
- Research Assistantship (10) 3500 9 600 15-20

University of Minnesota

MINNEAPOLIS, MINNESOTA 55455

Seymour Geisser, Director
School of Statistics

Applications must be filed by April 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: probability and statistics (10). TOTAL 10.

- Fellowship (2) 2400-2800 10
- Teaching Assistantship (15) 3525-3950 9 678 10 Teaching, Grading
- Research Assistantship (2) 3350 9 678 10 Research

1166
Winona State College

WINONA, MINNESOTA 55987
Harold A. Heckart, Head
Department of Mathematical Science
Applications must be filed by May 1, 1972

Teaching Assistantship (1) 1200 9 payable 5

MISSISSIPPI

Mississippi State College for Women

COLUMBUS, MISSISSIPPI 39701
Donald A. King, Head
Department of Mathematics
Applications must be filed by March 1, 1972

Fellowship (2) 300-500 9 6-10 Tutoring, Paper grading, etc.
Graduate Assistantship (2) 1000-1600 9

Mississippi State University

STATE COLLEGE, MISSISSIPPI 39762
John L. Tilley, Acting Head
Department of Mathematics
Applications must be filed by March 15, 1972

Teaching Assistantship (14) 3000 9 249/sem. 6 Teaching

University of Mississippi

UNIVERSITY, MISSISSIPPI 38677
Roy D. Sheffield, Chairman
Department of Mathematics
Applications must be filed by February 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: geometry and topology (1); analysis and functional analysis (4). TOTAL 5.

Fellowship (2) 2000-2600 9 253/sem.
Teaching Assistantship (15) 2400-3000 9 253/sem. 6

Missouri

Central Missouri State College

WARRENSBURG, MISSOURI 64093
H. Keith Stumpf, Head
Department of Mathematics
Applications must be filed by April 1, 1972

Teaching Assistantship (7) 1800-3600 9 300 5-10 Teaching
Northeast Missouri State College

KIRKSVILLE, MISSOURI 63501
Dale Woods, Head
Department of Mathematics
Applications must be filed by April 1, 1972

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St. Louis University

ST. LOUIS, MISSOURI 63102
Raymond W. Freese, Chairman
Department of Mathematics
Applications must be filed by February 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (3); geometry and topology (4); analysis and functional analysis (4); probability and statistics (3); computer science and numerical analysis (1). TOTAL 15.

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University of Missouri-Columbia

COLUMBIA, MISSOURI 65201
W. R. Utz, Chairman
Department of Mathematics
Applications must be filed by March 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (11); geometry and topology (1); analysis and functional analysis (5). TOTAL 17.

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University of Missouri-Columbia

COLUMBIA, MISSOURI 65201
Paul K. Blackwell, Chairman
Department of Computer Science
Applications must be filed by May 1, 1972

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University of Missouri-Columbia

COLUMBIA, MISSOURI 65201
David Lee Hanson, Chairman
Department of Statistics
Applications must be filed by March 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (5). TOTAL 8.

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*Fees are currently $250 per semester.
University of Missouri-Kansas City

KANSAS CITY, MISSOURI 64110
Paul Liebnitz, Chairman
Department of Mathematics

Ph, D, degrees awarded during last three years by field of specialization: algebra and number theory (1); analysis and functional analysis (2). TOTAL 3.

Teaching Assistantship (12) 3500-3700 9 1 Teaching class
Other (8) 5600-7200 12 2-3 Teaching classes

University of Missouri-Rolla

ROLLA, MISSOURI 65401
Glen Haddock, Chairman
Department of Mathematics
Applications must be filed by February 1, 1972

Ph, D, degrees awarded during last three years by field of specialization: geometry and topology (2); analysis and functional analysis (1); probability and statistics (5); computer science and numerical analysis (4); applied mathematics (1). TOTAL 13.

Fellowship (1) variable 9-12
Teaching Assistantship (36) 3500 9 230 20 Teaching
Research Assistantship (2) 3500 9 230 20 Research
Scholarship (2) variable 9-12

UNIVERSITY OF MISSOURI—KANSAS CITY
GRADUATE STUDY IN MATHEMATICS
1972—1973

The University of Missouri-Kansas City offers the Master of Arts, Master of Science and Doctor of Philosophy degrees in mathematics. The doctoral program was initiated in the fall of 1967 and evolved from a master's program offered for seventeen years. Doctoral research is now being conducted in point-set topology, complex analysis, ring theory, applied mathematics, numerical analysis, and statistics.

The Linda Hall Library of Science and Technology, one of the finest science libraries in the nation with a separate endowment of twenty-five million dollars, is adjacent to our campus. Linda Hall Library has an outstanding mathematical collection including subscriptions to more than 300 current mathematical journals. The University has full access to its holdings and services.

The Department of Mathematics invites applications for graduate assistantships with stipends starting at $3500 for nine months. Fees, amounting to $505 per year, are not included in these stipends.

Some NDEA Title IV fellowships and other fellowships will be available, and each applicant for a graduate assistantship will be considered for these awards.

For information and application forms write:

Paul Liebnitz, Chairman
Department of Mathematics
University of Missouri-Kansas City
Kansas City, Missouri 64110
University of Missouri-Rolla

ROLLA, MISSOURI 65401
Billy E. Gillett, Chairman
Department of Computer Science
Applications must be filed by March 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (5). TOTAL 5.

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Washington University

ST. LOUIS, MISSOURI 63130
Mitchell H. Taibleson, Chairman
Department of Mathematics
Applications must be filed by February 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (4); analysis and functional analysis (7). TOTAL 11.

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Washington University

ST. LOUIS, MISSOURI 63130
William E. Ball, Chairman
Department of Applied Mathematics and Computer Science
Applications must be filed by February 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (1); computer science and numerical analysis (3); applied mathematics (7). TOTAL 11.

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Montana State University

BOZEMAN, MONTANA 59715
Louis C. Barrett, Head
Department of Mathematics
Applications must be filed by February 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: geometry and topology (4); analysis and functional analysis (1); probability and statistics (2). TOTAL 7.

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*$81/qtr. nonresident
University of Montana

MISSOULA, MONTANA 59801
Howard E. Reinhardt, Chairman
Department of Mathematics
Applications must be filed by March 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (2). TOTAL 2.

Fellowship (2) 2600–3400 12
Teaching Assistantship (25) 2600–3000 9 52/qtr.* 5 Teaching

*$126.50/qtr. nonresident

University of Montana

MISSOULA, MONTANA 59801
R. P. Banaugh, Chairman
Department of Computer Science

Assistantships* (5) 2000 9

NEBRASKA

Chadron State College

CHADRON, NEBRASKA 69337
Keith B. Olson, Acting Head
Department of Mathematics
Applications must be filed by February 15, 1972

Teaching Assistantship (1-2) 2000 9 6 Teaching

Creighton University

OMAHA, NEBRASKA 68131
D. J. H. Fuller, Chairman
Department of Mathematics
Applications must be filed by March 15, 1972

Teaching Fellowship (3) 2600–2700 9 6 Teaching

Kearney State College

KEARNEY, NEBRASKA 68847
L. M. Larsen, Head
Department of Mathematics
Applications must be filed by March 1, 1972

Teaching Assistantship (5) 2000 9 6 Teaching
TYPE OF FINANCIAL ASSISTANCE | STIPEND AMOUNT IN DOLLARS | TUITION IF NOT INCLUDED IN STIPEND DOLLARS | SERVICE REQUIRED HOURS PER WEEK | TYPE OF SERVICE
--- | --- | --- | --- | ---
TYPE STIPEND | 9 OR 12 MONTHS | REQUIREMENT

University of Nebraska
LINCOLN, NEBRASKA 68508
Loren Argabright, Chairman
Department of Mathematics
Applications must be filed by March 1, 1972
Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (6); geometry and topology (1); analysis and functional analysis (6). TOTAL 13.

Fellowship (3) 2400-3000 9-12
Teaching Assistantship (50) 3000-3500 9 215/sem. 4-6 Teaching

University of Nebraska at Omaha
OMAHA, NEBRASKA 68101
Paul A. Haeder, Head
Department of Mathematics
Applications must be filed by April 1, 1972

Teaching Assistantship (6) 2520 9 18/cr. 6 Teaching

University of Nevada, Reno
RENO, NEVADA 89503
E. M. Beesley, Chairman
Department of Mathematics
Applications must be filed by early spring 1972

Teaching Fellowship (5) 2500-2700 9 20 Teaching

New Hampshire
Dartmouth College
HANOVER, NEW HAMPSHIRE 03755
J. Laurie Snell, Chairman
Department of Mathematics
Applications must be filed by March 1, 1972
Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (3); geometry and topology (4); logic (1); analysis and functional analysis (6); probability and statistics (3); combinatorics (1). TOTAL 18.

Fellowship (1) 3600 12 4-10 Teaching
Teaching Fellowship (16) 1500-2565 9 4-10 Teaching
Research Assistantship (3) 2250-2565 9 4-10 Research
NDEA or NSF Traineeship (5) 2400-3420 12 4-10 Teaching
University of New Hampshire

DURHAM, NEW HAMPSHIRE 03824
M. Evans Munroe, Chairman
Department of Mathematics
Applications must be filed by February 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (2); geometry and topology (2); analysis and functional analysis (1); applied mathematics (1). TOTAL 6.

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Fairleigh Dickinson University, Madison

MADISON, NEW JERSEY 07940
H. A. Elkholy, Chairman
Department of Mathematics and Physics
Applications must be filed by March 1, 1972

Teaching Fellowship (3) 2000 9 6 Teaching

Montclair State College

UPPER MONTCLAIR, NEW JERSEY 07043
Paul C. Clifford, Chairman
Department of Mathematics

Teaching Assistantship (2) 2000 9-12 9 Teaching

Princeton University

PRINCETON, NEW JERSEY 08540
William Browder, Chairman
Department of Mathematics
Applications must be filed by January 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (5); geometry and topology (11); logic (1); analysis and functional analysis (12); applied mathematics (1); mathematical physics (1). TOTAL 31.

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*$850 automatic tuition rebate for assistants who have not passed the General Exam; $1225 automatic tuition rebate for assistants who have passed General Exam.
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<td>Geoffrey S. Watson, Chairman</td>
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**RUTGERS UNIVERSITY**

_The State University of New Jersey_

**Graduate Study in Mathematics**

_toward the M.S. or Ph.D. degree_

**FIELDS:** Algebra (group theory, ring theory, category theory, commutative algebra, and non-associative algebra); Analysis (real analysis, complex analysis, differential equations, functional analysis, nonlinear functional analysis, numerical analysis, and linear and nonlinear programming); Geometry (algebraic geometry, differential geometry, and Lie groups); Logic (axiomatic set theory, model theory, and recursive functions); Topology (point-set topology, algebraic topology, and differential topology); Mathematical Physics, and Applied Mathematics.

**FACILITIES:** The mathematics library contains about 18,000 volumes and receives more than 290 journals. This collection is housed in the new Mathematical Sciences building. Every graduate student is assigned an individual desk in a graduate student office. The department sponsors more than 200 seminars each year. The University has an IBM 360/67 computer; a number of terminals are available for time-sharing use.

**FINANCIAL AID:** Government-sponsored fellowships and numerous research and teaching assistantships are available; each applicant for an assistantship will also be considered for these other awards. Apply by March 1, 1972.

**APPLICATION FORMS:** Write to

Graduate Admissions Office
RUTGERS UNIVERSITY
New Brunswick, New Jersey 08903

_An equal opportunity employer_
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University of New Mexico

ALBUQUERQUE, NEW MEXICO 87106

Simon T. Kao, Acting Chairman
Department of Mathematics and Statistics

Applications must be filed by February 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (7); geometry and topology (2); analysis and functional analysis (3); probability and statistics (4); computer science and numerical analysis (2); applied mathematics (5). TOTAL 23.

Fellowship (5) 2200-3600 12
Teaching Assistantship (28) 2400-3100 9

Teaching, Tutoring, Grading

NEW YORK

City University of New York, Brooklyn College

BROOKLYN, NEW YORK 11210

James Singer, Chairman
Department of Mathematics

Applications must be filed by March 1, 1972

Teaching Fellowship (3) 6350-7675 9 6-7 Teaching
Teaching Assistantship (5) 19/hr.-21/hr. 9 45/cr. 3-9 Teaching

ADELPHI UNIVERSITY

Garden City, N. Y. 11530

Department of Mathematics offers work in pure and applied mathematics leading to the M.S. and Ph.D. degrees. Fields of research are analysis, differential and integral equations, numerical analysis, probability theory, algebra, group theory, number theory, combinatorial analysis, geometry, applied mathematics (fluid dynamics, celestial mechanics, elasticity theory, electromagnetic theory, magnetohydrodynamics). A computing center (CDC 3300) is available for student research.

The M.S. Degree is also offered in Applied Science. In addition an In-Service N.S.F. Institute offers courses which lead to the M.S. for high school teachers of mathematics.

Applications for graduate scholarships, assistantships and traineeships are invited. Full-time graduate students have ample opportunity for close personal contact with the faculty. Living accommodations are available near the campus. Adelphi University is within easy (40 minutes) commuting distance from New York City by car or by train.

For Further Information Write to —
Chairman, Department of Mathematics
Adelphi University, Long Island, Garden City
New York, 11530; (516) PI-7-2200
<table>
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City University of New York, City College

NEW YORK, NEW YORK 10031
Fritz Steinhardt, Chairman
Department of Mathematics
Applications must be filed by April 1, 1972

Research Assistantship (1-2) 2500 9 payable 10-15 Miscellaneous

City University of New York, Graduate Center

NEW YORK, NEW YORK 10036
Alex Heller, Executive Officer
Department of Mathematics
Applications must be filed by February 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (3); geometry and topology (5); logic (2); analysis and functional analysis (3); computer science and numerical analysis (1); applied mathematics (5). TOTAL 19.

- Fellowship (8) 2400-2800 12
- Teaching Assistantship (30) 3000-7000 9 *
- Research Assistantship (5) 3200-3600 9-12 *

* Tuition waived in many cases

The Doctoral Program in Mathematics of The City University of New York

is at the Graduate Center Building of CUNY in mid-Manhattan, opposite the Public Library and Bryant Park.

Advanced students have office space and there is an excellent departmental library. The student body is small enough to facilitate close contact with the staff.


For a description of courses currently offered and other information, write to the Executive Officer in Mathematics
Graduate Center
THE CITY UNIVERSITY OF NEW YORK
33 West 42nd Street
New York, New York 10036
<table>
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<td>in dollars</td>
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### City University of New York, Hunter College

**NEW YORK, NEW YORK 10021**  
Mary P. Dolciani, Chairman  
Department of Mathematics  
Applications must be filed by April 1, 1972  

- **Teaching Assistantship (10)**  
  3020-5040  
  9  
  450/term  
  6-8 Teaching  
- **Scholarship (3)**  
  9

**NUMBER OF DEGREES AWARDED IN 1971**  
Baccalaureate degrees by institution 1566  
Baccalaureate degrees by department 56  
Master's degrees by department 16

### City University of New York, Lehman College

**BRONX, NEW YORK 10468**  
Israel H. Rose, Chairman  
Department of Mathematics  
Applications must be filed by December 1, 1972*  

- **Teaching Assistantship (8)**  
  855-2565  
  9  
  45/sem. hr. 3-9  

*Inquire at Student Financial Aids Office

### City University of New York, Queens College

**FLUSHING, NEW YORK 11367**  
Joseph Hershenov, Chairman  
Department of Mathematics  
Applications must be filed by February 1, 1972  

- **Teaching Assistantship** (Open only to CUNY Graduate Students)  
  6350  
  9  
  45/cr.  
  7 Teaching

### Clarkson College of Technology

**POTSDAM, NEW YORK 13676**  
Gustave Rabson, Chairman  
Department of Mathematics  
Applications must be filed by March 15, 1972  

- The Ph. D. program was recently started. The first Ph. D. degrees will be awarded in June, 1972.  
- **Fellowship (7)**  
  2400-2800  
  9  
  varies Research
- **Teaching Assistantship (8)**  
  2400-2700  
  9  
  3 Teaching
- **Research Assistantship (1)**  
  2400-2600  
  12  
  varies Research
- **Tuition Scholarship (2)**

### Columbia University

**NEW YORK, NEW YORK 10027**  
E. R. Lorch, Chairman  
Department of Mathematics  
Applications must be filed by January 10, 1972  

- **Fellowship (10)**  
  275/mo.  
  12  
  payable 15 Teaching

- Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (13); geometry and topology (7); analysis and functional analysis (15); applied mathematics (1). TOTAL 36.
Columbia University

NEW YORK, NEW YORK 10027
Myron F. Rosskopf, Chairman
Department of Mathematical Education
Teachers College
Applications must be filed by February 1, 1972
Ph. D. degrees awarded during last three years by field of specialization: mathematical education (5). TOTAL 5.

Research Assistantship (6)  6000  12  90/cr.  35
Scholarship (7)  tuition-2500  9

Columbia University

NEW YORK, NEW YORK 10027
Ralph J. Schwarz, Chairman
Department of Electrical Engineering and Computer Science
Applications must be filed by January 17, 1972
Ph. D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (12); electrical engineering (38). TOTAL 50.

Fellowship (6)  9
Teaching Assistantship (8)  2300  9  17
Research Assistantship (15)  3600-3900  12  35  Research

Columbia University

NEW YORK, NEW YORK 10027
Herbert E. Robbins
Department of Mathematical Statistics
Applications deadline is open
Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (15). TOTAL 15.

Fellowship (20)  275/mo.  9-12  10  Teaching*
Research Assistantship (4)  275/mo.  9-12

*Required of all students in 2nd and 3rd years

Cornell University

ITHACA, NEW YORK 14850
W. H. Fuchs, Chairman
Department of Mathematics
Applications must be filed by February 1, 1972
Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (10); geometry and topology (10); logic (5); analysis and functional analysis (10); probability and statistics (2); applied mathematics (2). TOTAL 38.

Fellowship (15)  2000-3000  9
Teaching Fellowship (1)  2800  12  15  Teaching
Teaching Assistantship (45)  2700-2800  9  15  Teaching
Research Assistantship (8)  5200  9  2800  Research
Cornell University

ITHACA, NEW YORK 14850
William F. Lucas, Director
Center for Applied Mathematics

Applications must be filed by February 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: applied mathematics (11). TOTAL 11.

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Fordham University

NEW YORK, NEW YORK 10458
Hing Tong, Chairman
Department of Mathematics

Applications must be filed by February 1, 1972

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Hofstra University

HEMPSTEAD, NEW YORK 11550
Robert J. Bumcro, Chairman
Department of Mathematics

Applications must be filed by February 15, 1972

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<td>4½ or 9</td>
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1180
**New York, New York**

**New York University**

New York, New York 10003

Louis Nirenberg, Director
Courant Institute of Mathematical Sciences

Departments of Mathematics and Computer Science

Applications must be filed by January 15, 1972

Ph.D. degrees awarded during last three years by field of specialization:
- algebra and number theory (18)
- geometry and topology (2)
- logic (2)
- analysis and functional analysis (22)
- probability and statistics (4)
- computer science and numerical analysis (7)
- applied mathematics (24)
- mathematical physics (1)

TOTAL 80.

- Fellowship (22) 3300-3700 12 Individual
- Research Assistantship (32) 3300-3700 12 Individual

**New York University, University Heights**

Bronx, New York 10453

Joseph B. Keller, Chairman
Department of Mathematics

Applications must be filed by April 1, 1972

Ph.D. degrees awarded during last three years by field of specialization:
- applied mathematics (1)

TOTAL 1.

- Teaching Assistantship (6) 3000-3500 12 1500 4 Teaching
- Research Assistantship (2) 3000-3500 12 1500 10 Research
- Scholarship (3) 2400-2800 12 2500 10 Teaching

**Polytechnic Institute of Brooklyn**

Brooklyn, New York 11201

Harry Hochstadt, Head
Department of Mathematics

Applications must be filed by March 1, 1972

Ph.D. degrees awarded during last three years by field of specialization:
- algebra and number theory (3)
- analysis and functional analysis (6)
- probability and statistics (2)
- computer science and numerical analysis (1)
- applied mathematics (2)

TOTAL 14.

- Teaching Fellowship (12) 2800-3000 9 6-8 Teaching
- Scholarship (4) 3000-3500 9
Rensselaer Polytechnic Institute

TROY, NEW YORK 12181
George H. Handelman, Chairman
Department of Mathematics
Applications must be filed by February 15, 1972

Ph.D. degrees awarded during last three years by field of specialization: geometry and topology (3); analysis and functional analysis (2); computer science and numerical analysis (6); applied mathematics (11); operations research and statistics (9). TOTAL 30.

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St. John's University

JAMAICA, NEW YORK 11432
Edward J. Miranda, Chairman
Department of Mathematics
Applications must be filed by March 15, 1972

Teaching Assistantship (8) 2400-2600 10

State University College at Brockport

BROCKPORT, NEW YORK 14420
Edward O. Stephany, Chairman
Department of Mathematics
Applications must be filed by April 1, 1972

Teaching Assistantship (4) 2500 9

State University College at Buffalo

BUFFALO, NEW YORK 14222
Rudolph J. Cherkauer, Chairman
Department of Mathematics
Applications must be filed by February 14, 1972

Teaching Assistantship (4) 2500-2700 10

ST. JOHN’S UNIVERSITY

An urban university in a suburban setting...within easy travel distance of some of the world’s richest cultural and research resources.

The Mathematics faculty is actively engaged in research relating to fluid dynamics, diffraction theory, graph theory, statistics, operations research, ordinary differential equations, control theory, functional analysis, point set topology, and elasticity.

Graduate work leading to the Master of Arts is offered in both pure and applied mathematics.

Approximately twelve graduate assistantships will be available for the academic year 1972-73.
Interested students are requested to write:

Edward J. Miranda, Chairman
Department of Mathematics—St. John’s University
Jamaica, New York 11432
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**State University College at Cortland**

CORTLAND, NEW YORK 13045  
Nancy Tapper, Chairman  
Department of Mathematics  
Applications must be filed by February 1, 1972

Teaching Assistantship (*)  
2500 9

*Number not known because of budget considerations

**State University College at Fredonia**

FREDONIA, NEW YORK 14063  
Frank R. Olson, Chairman  
Department of Mathematics  
Applications must be filed by March 15, 1972

Teaching Assistantship (4)  
2200-2400 9

**State University College at Geneseo**

GENESEO, NEW YORK 14454  
William A. Small, Chairman  
Department of Mathematics

No assistantships will be available this year.

**State University College at Plattsburgh**

PLATTSBURGH, NEW YORK 12901  
William Hartnett, Chairman  
Department of Mathematics  
Applications must be filed by February 1, 1972

Teaching Fellowship (2)  
2500 10

**State University of New York at Albany**

ALBANY, NEW YORK 12203  
Vincent F. Cowling, Chairman  
Department of Mathematics  
Applications must be filed by March 1, 1972

Fellowship (2)  
3600 12
Teaching Assistantship (16)  
2800–3000 10
Research Assistantship (2)  
3600 12

**State University of New York at Albany**

ALBANY, NEW YORK 12203  
E. D. Reilly, Jr., Chairman  
Department of Computer Science  
Applications must be filed by March 1, 1972

Teaching Assistantship (7)  
2800 9
State University of New York at Binghamton

BINGHAMTON, NEW YORK 13901
Louis F. McAuley, Chairman
Department of Mathematics
Applications must be filed by March 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: geometry and topology (4). TOTAL 4.

State University of New York at Buffalo

AMHERST, NEW YORK 14226
Nicholas D. Kazarinoff, Chairman
Department of Mathematics
Applications must be filed by March 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (2); geometry and topology (2); logic (1); analysis and functional analysis (2). TOTAL 7.

STATE UNIVERSITY OF NEW YORK
AT
BINGHAMTON

The Mathematics Department of the State University of New York at Binghamton is growing rapidly, and can now offer graduate students both an unusual amount of personal attention from an active faculty and a lively research atmosphere. A number of active research seminars in algebra, topology and analysis is held during the year. Doctoral research is possible in the fields of algebra, differential equations, functional analysis, graph theory, and topology. The Department is especially strong in some areas of topology. For example: decomposition spaces, fiber spaces and generalized fiber spaces, general topology, geometric topology, monotone mappings, open mappings, and PL topology.

Further information about the program may be obtained by writing to The Department of Mathematics.

STATE UNIVERSITY OF NEW YORK AT BUFFALO

Graduate assistantships are available in various amounts (this year from $2,900 to $3,550) with remission of tuition. An increase in stipends is hoped for next year. Duties may include a maximum of 4 hours of teaching or similar work per week. Other possible sources of support include NSF, NASA and NDEA Fellowships and Traineeships. Numerous summer teaching and research appointments are customarily offered.

SUNY at Buffalo has an active program in graduate mathematics leading to both M.A. and Ph.D. degrees. Doctorates are offered in algebra, algebraic geometry, complex analysis, differential equations, applied mathematics, functional analysis, logic, number theory and topology. There is a well-developed interdisciplinary program of mathematics and theoretical biology.

For more information and application forms, write to:

Director of Graduate Studies, Department of Mathematics
STATE UNIVERSITY OF NEW YORK AT BUFFALO
4246 Ridge Lea Road, Amherst, New York 14226

1184
State University of New York at Buffalo

AMHERST, NEW YORK 14226

Emanuel Parzen, Chairman
Department of Statistics
Applications must be filed by March 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (5). TOTAL 5.

Fellowship (3) 2400-2800* 12
Teaching Assistantship (15) 2800-3300 10
Research Assistantship (2) 3000-3600 12
Traineeship (11) 2400-3600 12

* + $500 for each dependent

State University of New York at Buffalo

AMHERST, NEW YORK 14226

Gabor T. Herman, Acting Chairman
Department of Computer Science
Applications must be filed by February 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (2). TOTAL 2.

Fellowship (3) 16 Research
Teaching Assistantship (10) 16 Teaching
Research Assistantship (19) 16 Computing Center or Research

State University of New York at Stony Brook

STONY BROOK, NEW YORK 11790

R. G. Douglas, Chairman
Department of Mathematics
Applications must be filed by March 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (3); geometry and topology (4); analysis and functional analysis (4). TOTAL 11.

Fellowship (3) 2500-2900 12
Teaching Fellowship (4) 2500-2900 12
Teaching Assistantship (60) 750-2250 10
Research Assistantship (5) 650-2500 10
Nonsupported (10) 4-6

State University of New York at Stony Brook

STONY BROOK, NEW YORK 11790

A. H. Zemanian, Acting Chairman
Department of Applied Mathematics and Statistics
Applications must be filed by March 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: applied mathematics (13). TOTAL 13.

Fellowship (1) 2600-2800 9
Teaching Fellowship (2) 2400-2600 9
Teaching Assistantship (20) 700-3000 9
Research Assistantship (24) 700-3000 9
Scholarship (12) 1000* 9
G. R. A. ** (2) 2800-3000 9

* Tuition waiver
** Stipends granted by individual faculty members on grants
Syracuse University

SYRACUSE, NEW YORK 13210

Erik Hemmingsen, Chairman
Department of Mathematics
Applications must be filed by March 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (5); geometry and topology (1); analysis and functional analysis (3). TOTAL 9.

Fellowship (2) 2000 9
Teaching Assistantship (20) 2550–3000 9 small fee 6 Teaching

Syracuse University

SYRACUSE, NEW YORK 13210

Warren L. Semon, Director
Systems and Information Science
Applications must be filed by March 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (7). TOTAL 7.

Fellowship (4) 2400 12
Teaching Assistantship (12) 2490 9 20 Teaching
Research Assistantship (14) 4150 12 20/40 Research

University of Rochester

ROCHESTER, NEW YORK 14627

Gail S. Young, Chairman
Department of Mathematics
Applications must be filed by February 15, 1972

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (3); geometry and topology (7); analysis and functional analysis (7); probability and statistics (1); applied mathematics (1). TOTAL 19.

Fellowship (2) 2400–2800 12 payable 2 Teaching
Teaching Fellowship* (8) 1000 9 4 Teaching
Teaching Assistantship (30) 2700 9
Scholarship (2)

*Teaching Fellows usually also have some sort of external fellowship as the primary source of support.

University of Rochester

ROCHESTER, NEW YORK 14627

W. J. Hall, Chairman
Department of Statistics
Applications must be filed by March 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (3); geometry and topology (7); analysis and functional analysis (7); probability and statistics (1); applied mathematics (1). TOTAL 19.

Fellowship (1) 2600 12
Teaching Assistantship (17) 2700–3200 9–12 12–15
Research Assistantship (3) 2700–3200 9–12 12–15
Scholarship (3) Tuition 9–12

1186
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<td>Lewis A. Coburn, Chairman</td>
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<td>DURHAM, NORTH CAROLINA 27706</td>
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<td>J. R. Shoenfield, Chairman</td>
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<td>Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (8); geometry and topology (4); analysis and functional analysis (3); probability and statistics (4); computer science and numerical analysis (1); combinatorial analysis (1). TOTAL 21.</td>
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<td>Tullio J. Pignani, Chairman</td>
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<td><strong>North Carolina State University</strong></td>
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<tr>
<td>Nicholas J. Rose, Head</td>
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<td>Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (4); geometry and topology (1); logic (5); probability and statistics (2); applied mathematics (5). TOTAL 17.</td>
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<td>Fellowship (2)</td>
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<tr>
<td>Teaching Assistantship (54)</td>
<td>2900-3600</td>
<td>9</td>
<td>425* 6-8 Teaching</td>
</tr>
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<td>*$2000 nonresident. Includes tuition and required fees.</td>
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</table>
North Carolina State University

RALEIGH, NORTH CAROLINA 27607

D. D. Mason, Head
Department of Statistics
Applications must be filed by February 15, 1972, for Fellowships; March 1, 1972, for Assistantships
Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (30); biomathematics (4). TOTAL 34.

<table>
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<th>Type</th>
<th>Stipend amount in dollars</th>
<th>Tuition if not included in stipend (dollars)</th>
<th>Service required type of service</th>
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University of North Carolina

CHAPEL HILL, NORTH CAROLINA 27514

Fred B. Wright, Chairman
Department of Mathematics
Applications must be filed by February 1, 1972
Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (6); geometry and topology (1); analysis and functional analysis (4). TOTAL 11.

<table>
<thead>
<tr>
<th>Number of Degrees Awarded in 1971</th>
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<tr>
<td>Baccalaureate degrees by institution</td>
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<tr>
<td>Baccalaureate degrees by department</td>
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<td>Master’s degrees by department</td>
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<th>Tuition if not included in stipend (dollars)</th>
<th>Service required type of service</th>
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<td>Fellowship (2)</td>
<td>4000-4600</td>
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<td>Teaching Fellowship (8)</td>
<td>4200-4400</td>
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<tr>
<td>Teaching Assistantship (24)</td>
<td>3600-4400</td>
<td>3* Teaching</td>
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<tr>
<td>*Plus Preparation</td>
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<td>**$400 in-state, $1960 out-of-state</td>
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</tbody>
</table>

University of North Carolina

CHAPEL HILL, NORTH CAROLINA 27514

Bernard G. Greenberg, Chairman
Department of Biostatistics
Applications must be filed by April 1, 1972
Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (9); public health (2). TOTAL 11.

<table>
<thead>
<tr>
<th>Number of Degrees Awarded in 1971</th>
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</thead>
<tbody>
<tr>
<td>Baccalaureate degrees by Institution</td>
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<tr>
<td>Master’s degrees by department</td>
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</tbody>
</table>

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<th>Type</th>
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<th>Tuition if not included in stipend (dollars)</th>
<th>Service required type of service</th>
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<td>Fellowship (30)</td>
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<td>Research Assistantship (4)</td>
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<td>NDEA (1)</td>
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<td>USPHS Traineeship (6)</td>
<td>2400-3600</td>
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</table>

*Out-of-state

University of North Carolina

CHAPEL HILL, NORTH CAROLINA 27514

F. J. Gould, Chairman
Curriculum in Operations Research and Systems Analysis
Applications must be filed by February 1, 1972

<table>
<thead>
<tr>
<th>Number of Degrees Awarded in 1971</th>
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<td>Baccalaureate degrees by institution</td>
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<tr>
<td>Teaching Fellowship (1)</td>
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<tr>
<td>Research Assistantship (11)</td>
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<td>9</td>
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</table>
### University of North Carolina

CHAPEL HILL, NORTH CAROLINA 27514
Norman L. Johnson, Chairman
Department of Statistics

Applications must be filed by March 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (7). TOTAL 7.

<table>
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<th>TYPE</th>
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<td>Scholarship (2)</td>
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### University of North Carolina at Greensboro

GREENSBORO, NORTH CAROLINA 27412
E. E. Posey, Head
Department of Mathematics

Applications must be filed by April 15, 1972

<table>
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<td>300 3-6 Teaching</td>
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<td>Research Assistantship (3)</td>
<td>1200–2400</td>
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<td>300 varies Research assistant</td>
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### Wake Forest University

WINSTON-SALEM, NORTH CAROLINA 27109
Ivey C. Gentry, Chairman
Department of Mathematics

Applications must be filed by March 1, 1972

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### University of North Dakota

GRAND FORKS, NORTH DAKOTA 58201
Ronald Bzoch, Chairman
Department of Mathematics

Applications must be filed by April 1, 1972

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<td>6 Teaching</td>
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### Case Western Reserve University

CLEVELAND, OHIO 44106
A. J. Lohwater, Chairman
Department of Mathematics and Statistics

Applications must be filed by March 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (3); logic (3); analysis and functional analysis (10); probability and statistics (7); computer science and numerical analysis (5); applied mathematics (3); others (1). TOTAL 32.

<table>
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<td>of financial assistance</td>
<td>amount in dollars</td>
<td>9 or 12 months</td>
<td>if not included in stipend (dollars)</td>
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<td>(with number anticipated in 1972-1973)</td>
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### Case Western Reserve University

Case Western Reserve University  
CLEVELAND, OHIO 44106  
Edward L. Glaser, Head  
Department of Computing and Information Sciences  
Applications must be filed by March, 1972

Ph.D. degrees awarded during last three years by field of specialization: computer and information sciences and engineering science and numerical analysis (21); linguistics (2). TOTAL 23.

- Fellowship (2)  
  - 6000-7300  
  - 9-12
- Teaching and Research Assistantship (30)  
  - 6000-7300  
  - 9-12
- Self-support (30)

---

### Case Western Reserve University

Case Western Reserve University  
CLEVELAND, OHIO 44106  
Burton V. Dean, Chairman  
Department of Operations Research  
Applications must be filed by March 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: operations research (22). TOTAL 22.

- Fellowship (12)  
  - 2385  
  - 9
- Teaching Fellowship (4)  
  - 2385  
  - 9
- Teaching Assistantship (2)  
  - 4400  
  - 9-12
- Research Assistantship (14)  
  - 4400  
  - 9-12
- Scholarship (1)  
  - 4185  
  - 9
- Traineeship (2)  
  - 2400-2800  
  - 12

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### Cleveland State University

Cleveland State University  
CLEVELAND, OHIO 44115  
Robert R. Stoll, Chairman  
Department of Mathematics  
Applications must be filed by May 15, 1972

- Teaching Assistantship (5)  
  - 2400-3000  
  - 9  
  - 4/4 Teaching/Research

---

### John Carroll University

John Carroll University  
CLEVELAND, OHIO 44118  
Leo J. Schneider, Chairman  
Department of Mathematics  
Applications must be filed by March 1, 1972

- Teaching Assistantship (7)  
  - 2000  
  - 9  
  - 20 Assisting and Tutoring

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### Kent State University

Kent State University  
KENT, OHIO 44240  
Richard K. Brown, Chairman  
Department of Mathematics  
Applications must be filed by March 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: analysis and functional analysis (1). TOTAL 1.

- Fellowship (3)  
  - 2400-2500  
  - 9
- Teaching Fellowship (10)  
  - 3800-4200  
  - 9
- Teaching Assistantship (20)  
  - 2500-3000  
  - 9
- NSF Traineeship (1)  
  - 12

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1190
**Miami University**

OXFORD, OHIO 45056  
Lyman C. Peck, Chairman  
Department of Mathematics  
Applications must be filed by February 1, 1972*

| Teaching Assistantship (25) | 2610 | 9 |

*Will be accepted after this date

**Ohio State University**

COLUMBUS, OHIO 43210  
Arnold E. Ross, Chairman  
Department of Mathematics  
Applications must be filed by February 14, 1972

Fellowship (25)  
2400–3000*  
Teaching Assistantship (120)  
2700–3300  
Research Assistantship (5)  
2400–varies

*Some fellowships carry additional allowance for dependents

**Ohio State University**

COLUMBUS, OHIO 43210  
Marshall C. Yovits, Chairman  
Department of Computer and Information Science  
Applications must be filed by February 1, 1972, for fellowships; April 15, 1972, for assistantships

Fellowship (20)  
2200  
Teaching Assistantship (30)  
2700–up  
Research Assistantship (30)  
3300–up  

**Ohio State University**

COLUMBUS, OHIO 43210  
D. R. Whitney, Chairman  
Department of Statistics  
Applications must be filed by February 15, 1972

Fellowship (2)  
2400–3000  
Teaching Assistantship (5)  
2700–3000  

**Ohio University**

ATHENS, OHIO 45701  
R. G. Helsel, Chairman  
Department of Mathematics and Computer Science  
Applications must be filed by March 1, 1972*

Teaching Assistantship (25)  
2800–4000  

*Late applications considered if vacancies exist
University of Akron

AKRON, OHIO 44304
William H. Beyer, Head
Department of Mathematics
Applications must be filed by March 1, 1972

Teaching Assistantship (15) 2400-3600 9 20 Teaching

University of Cincinnati

CINCINNATI, OHIO 45221
Edward P. Merkes, Head
Department of Mathematics
Applications must be filed by May 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (2); geometry and topology (1); applied mathematics (2). TOTAL 5.

Fellowship (10) 2000-4000 9-12 20 Research
Teaching Assistantship (35) 2400-2800 9 8 Teaching
Research Assistantship (1) 3000 9 20 Research

University of Dayton

DAYTON, OHIO 45409
Kenneth C. Schraut, Chairman
Department of Mathematics
Applications must be filed by March 15, 1972

Teaching Assistantship (8) 2800 9 6 Teaching

University of Toledo

TOLEDO, OHIO 43606
S. S. Blakney, Chairman
Department of Mathematics
Applications must be filed by March 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: analysis and functional analysis (2); applied mathematics (1). TOTAL 3.

Fellowship (2) 2600-3000 12 100 fee 4-6 Teaching
Teaching Assistantship (17) 2500-4000 9
Scholarship (2) Tuition-3000 12

Wright State University

DAYTON, OHIO 45431
Robert D. Dixon, Chairman
Department of Mathematics
Applications must be filed by March 1, 1972

Teaching Assistantship (15) 2900-3000 9 4/qtr. hr. 6 Teaching
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### Youngstown State University

**YOUNGSTOWN, OHIO 44503**

B. J. Yozwiak, Chairman
Department of Mathematics
Applications must be filed by March 1, 1972

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### Xavier University

**CINCINNATI, OHIO 45207**

William J. Larkin III, Chairman
Department of Mathematics
Applications must be filed by March 1, 1972

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### OKLAHOMA

### Oklahoma State University

**STILLWATER, OKLAHOMA 74074**

John Jewett, Head
Department of Mathematics and Statistics
Applications must be filed by February 15, 1972

| Teaching Assistantship (70) | 2700-2880 | 9 | 14/sem. hr. | 5-8 | Teaching |
| Research Assistantship (5) | 2700-2880 | 9 | 14/sem. hr. | 18 | Research |

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (1); analysis and functional analysis (6); probability and statistics (6). TOTAL 13.

*Late applications will be considered for any vacancies that remain

### Oklahoma State University

**STILLWATER, OKLAHOMA 74074**

Donald D. Fisher, Head
Department of Computer Science
Applications must be filed by March 1, 1972

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### University of Oklahoma

**NORMAN, OKLAHOMA 73069**

Gene Levy, Chairman
Department of Mathematics
Applications must be filed by March 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (8); geometry and topology (5); logic (1); analysis and functional analysis (3); computer science and numerical analysis (1). TOTAL 18.
University of Oklahoma

NORMAN, OKLAHOMA 73069
Ronald R. Mohler, Chairman
Department of Information and Computing Sciences
Applications must be filed by May 1, 1972

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Oregon State University

CORVALLIS, OREGON 97331
James R. Brown, Acting Chairman
Department of Mathematics
Applications must be filed by February 15, 1972

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (5); geometry and topology (6); analysis and functional analysis (7); probability and statistics (2); computer science and numerical analysis (2); applied mathematics (6). TOTAL 27.

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Oregon State University

CORVALLIS, OREGON 97331
Donald A. Pierce, Acting Chairman
Department of Statistics
Applications must be filed by March 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: probability and statistics (8); operations research (1). TOTAL 9.

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Portland State University

PORTLAND, OREGON 97207
J. Richard Byrne, Head
Department of Mathematics
Applications must be filed by June 15, 1972

Teaching Assistantship (6) | 2952-3060 | 9       | 129 (1971-72) | about 12 |

1194
University of Oregon

EUGENE, OREGON 97403
C. W. Curtis, Head
Department of Mathematics
Applications must be filed by March 1, 1972

Ph. D. degrees awarded during the last three years by field of specialization: algebra and number theory (18); geometry and topology (8); analysis and functional analysis (8); probability and statistics (2); computer science and numerical analysis (4). TOTAL 40.

Teaching Assistantship (30) 2425–3925 9 123 4–5 Teaching
Research Assistantship (4) 2425–3925 9 123 8–10 Research

University of Oregon

EUGENE, OREGON 97403
David Moursand, Head
Department of Computer Science
Applications must be filed by March 1, 1972

Teaching Fellowship (6) 2500–3400 9 41.50/qtr. 4 Teaching

Pennsylvania

Bryn Mawr College

BRYN MAWR, PENNSYLVANIA 19010
J. C. Oxtoby, Chairman
Department of Mathematics
Applications must be filed by February 1, 1972

Fellowship (1) 2000 9 1/3-time
Teaching Assistantship (2) 1550 9
Scholarship (1) 1500 9
Tuition Grant 2100 9

Bucknell University

LEWISBURG, PENNSYLVANIA 17837
David S. Ray, Chairman
Department of Mathematics
Applications must be filed by March 1, 1972

Fellowship (2) 600 9
Teaching Assistantship (5) 2200–2400 9
Scholarship (3) 9

California State College

CALIFORNIA, PENNSYLVANIA 15419
August J. Bethem, Chairman
Department of Mathematics
Applications must be filed by April 1, 1972

Fellowship (4) 1200–2600 9

Number of Degrees Awarded in 1971
- Baccalaureate degrees by institution
- Baccalaureate degrees by department
- Master's degrees by department

1195
Carnegie-Mellon University

PITTSBURGH, PENNSYLVANIA 15213

I. I. Kolodner, Head
Department of Mathematics
Applications must be filed by March 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: geometry and topology (4); logic (2); analysis and functional analysis (9); computer science and numerical analysis (1); applied mathematics (2). TOTAL 18.

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Drexel University

PHILADELPHIA, PENNSYLVANIA 19104

Dale W. Lick, Head
Department of Mathematics
Applications must be filed by April 15, 1972

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<th>TYPE OF ASSISTANCE</th>
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Duquesne University

PITTSBURGH, PENNSYLVANIA 15219
C. F. Sebesta, Chairman
Department of Mathematics

Teaching Assistantship (7) 2000 9 6–7

East Stroudsburg State College

EAST STROUDSBURG, PENNSYLVANIA 18301
Samuel P. Wallace, Head
Department of Mathematics
Applications must be filed by September 1, 1972

Research Assistantship (2) 1200 9 16

Indiana University of Pennsylvania

INDIANA, PENNSYLVANIA 15701
Melvin R. Woodard, Chairman
Department of Mathematics
Applications must be filed by March 25, 1972

Teaching Assistantship (12) 1200–2705 9

Kutztown State College

KUTZTOWN, PENNSYLVANIA 19530
Edward W. Evans, Head
Department of Mathematics
Applications must be filed by June 1, 1972

Teaching Assistantship (3) 1200–2700 9

DREXEL UNIVERSITY

The Drexel Mathematics Department offers graduate programs leading to the M. S. and Ph. D. degrees. In addition to the regular masters’ degree program is a cooperative M. S. program with cooperating industries during the summers. The Ph. D. program is primarily concentrated in the areas of analysis and applied mathematics. Financial aid is available through teaching and research assistantships, fellowships, and traineeships which carry stipends from $2,475 to $3,600 and a waiver of tuition and fees.

Interested applicants should request further information from:
Dr. Dale W. Lick, Head, Mathematics Department
Drexel University
Philadelphia, Pennsylvania 19104
Lehigh University

BETHLEHEM, PENNSYLVANIA 18015

Fellowship (8) 2400-3600 12
Teaching Assistantship (31) 2300-2750** 9
Research Assistantship (2) 20
Scholarship (2)

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (3); geometry and topology (7); logic (2); analysis and functional analysis (13); probability and statistics (1); applied mathematics (2). TOTAL 28.

Mansfield State College

MANSFIELD, PENNSYLVANIA 16933

Graduate Assistantship (2) 1200 9

Ph.D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (10). TOTAL 10.

Pennsylvania State University

UNIVERSITY PARK, PENNSYLVANIA 16802

Fellowship (10) 2400-2800 12
Teaching Assistantship (70) 2880-3060 9

Ph.D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (10). TOTAL 10.
Pennsylvania State University
UNIVERSITY PARK, PENNSYLVANIA 16802
William L. Harkness, Head
Department of Statistics
Applications preferred by February 15, 1972

Ph. D. degrees during last three years by field of specialization: probability and statistics (8). TOTAL 8.
Fellowship (2)
Teaching Assistantship (5) 2700-3060 9

Shippensburg State College
SHIPPENSBURG, PENNSYLVANIA 17257
James L. Sieber, Chairman
Department of Mathematics
Applications must be filed by March 1, 1972

Teaching Assistantship (3) 12

Temple University
PHILADELPHIA, PENNSYLVANIA 19122
Albert Schild, Chairman
Department of Mathematics
Applications must be filed by March 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (3); geometry and topology (1); analysis and functional analysis (3). TOTAL 7.
Fellowship (4) 2700-2900 12
Teaching Assistantship (20) 3000-3400 9
Research Assistantship (6) 3000-3400 9
Scholarship (4)

Temple University
PHILADELPHIA, PENNSYLVANIA 19140
Stanley Schor, Chairman
Department of Biometrics, Medical School
Applications must be filed by March 1, 1972

Fellowship (2)
Research Assistantship (15)
Scholarship (5)

Temple University
PHILADELPHIA, PENNSYLVANIA 19122
William C. Stewart, Chairman
Department of Statistics
Applications must be filed by February, 1972

Fellowship (2) 3000-3600 9
Research Assistantship (6) 3000-3600 9

Type Stipend Tuition Service Required
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NUMBER OF DEGREES AWARDED IN 1971
Baccalaureate degrees by institution 6054
Master's degrees by department 10
Baccalaureate degrees by department 665
Master's degrees by department 5
Ph.D. degrees awarded during last three years by field of specialization: probability and statistics (8). TOTAL 8.
Fellowship (2)
Teaching Assistantship (5) 2700-3060 9

NUMBER OF DEGREES AWARDED IN 1971
Baccalaureate degrees by institution 1100
Master's degrees by department 14
Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (3); geometry and topology (1); analysis and functional analysis (3). TOTAL 7.
Fellowship (4) 2700-2900 12
Teaching Assistantship (20) 3000-3400 9
Research Assistantship (6) 3000-3400 9
Scholarship (4)

NUMBER OF DEGREES AWARDED IN 1971
Baccalaureate degrees by institution 1100
Master's degrees by department 1
University of Pennsylvania

PHILADELPHIA, PENNSYLVANIA 19104
Eugenio Calabi, Chairman
Department of Mathematics

Applications must be filed by February 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (7); geometry and topology (6); analysis and functional analysis (6); others (1). TOTAL 20.

- Fellowship 2400 9
- Teaching Fellowship 2700-2950 9

University of Pennsylvania

PHILADELPHIA, PENNSYLVANIA 19104
John W. Carr III, Chairman
Moore School of Electrical Engineering
Graduate Group in Computer and Information Sciences

Applications must be filed by February 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (12). TOTAL 12.

- Teaching Assistantship (20) 2500–2900 9 20 Teaching
- Research Assistantship (20) 2500–2900 9–12 20 Research
- Scholarship (20) 2200–3600 9–12

University of Pittsburgh

PITTSBURGH, PENNSYLVANIA 15213
Wilbur E. Deskins, Chairman
Department of Mathematics

Applications must be filed by January 31, 1972

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (4); geometry and topology (2); logic (1); analysis and functional analysis (9); computer science and numerical analysis (1); applied mathematics (2). TOTAL 19.

- Fellowship (5) 3000–4300 9–12 6 Teaching
- Teaching Fellowship (26) 2800–4800 8–12 6 Teaching
- Teaching Assistantship (26) 2600–3900 8–12

TEMPLE UNIVERSITY, PHILADELPHIA

offers an M.A. and Ph.D. program in Mathematics in a variety of fields including Algebra, Group Theory, Number Theory, Geometry, Topology, Probability and Statistics, Analysis, and Functional Analysis. In addition, a new Ph.D. program with special consideration for pedagogical theory and methods, and a terminal evening MA program in Applied Mathematics are being initiated in 1972-73.

A limited number of assistantships and fellowships is available. For further information and applications for admission and financial support write to:

Dr. Albert Schild, Chairman
Department of Mathematics
TEMPLE UNIVERSITY
Philadelphia, Pennsylvania 19122

1200
# University of Pittsburgh

**PITTSBURGH, PENNSYLVANIA 15228**

Orrin E. Taulbee, Chairman  
Department of Computer Science  
Applications must be filed by March 15, 1972

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*Limited number available on 12 months basis with 50% increase in stipend

# Villanova University

**VILLANOVA, PENNSYLVANIA 19085**

James O. Brooks, Chairman  
Department of Mathematics  
Applications must be filed by March 15, 1972

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# Wilkes College

**WILKES-BARRE, PENNSYLVANIA 18702**

Bing Kuen Wong, Chairman  
Department of Mathematics  
Applications must be filed by March 15, 1972*

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*Late applications considered if funds are available  
**Number available is not fixed

# PUERTO RICO

## University of Puerto Rico

**MAYAGUEZ, PUERTO RICO 00708**

Eugene A. Francis, Chairman  
Department of Mathematics  
Applications must be filed by April 30, 1972

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## University of Puerto Rico

**RIO PIEDRAS, PUERTO RICO 00923**

Harold J. Stolberg, Chairman  
Department of Mathematics  
Applications must be filed by March 31, 1972

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RHODE ISLAND

Brown University

PROVIDENCE, RHODE ISLAND 02912
Allan H. Clark, Chairman
Department of Mathematics
Applications must be filed by January 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (2); geometry and topology (6); analysis and functional analysis (7); probability and statistics (2). TOTAL 17.

- Fellowship (8) 2500-3000 9-12
- Teaching Assistantship (15) 2500-2800 9
- Research Assistantship (2) 4650-5000 9 2137 Research
- Scholarship (2) 1500-2850 7 Teaching

Brown University

PROVIDENCE, RHODE ISLAND 02912
Joseph P. LaSalle, Chairman
Department of Applied Mathematics
Applications must be filed by January 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: analysis and functional analysis (13); probability and statistics (2); computer science and numerical analysis (6); applied mathematics (19). TOTAL 40.

- Fellowship (10) 2400 9
- Teaching Assistantship (13) 2400-3000 9 6 Teaching and Research
- Research Assistantship (12) 2400-3000 9

Rhode Island College

PROVIDENCE, RHODE ISLAND 02908
Robert F. Steward, Chairman
Department of Mathematics
Applications must be filed by March 1, 1972

- Teaching Assistantship (2) 2500 9
- Scholarship (1) 2000 9

University of Rhode Island

KINGSTON, RHODE ISLAND 02881
V. Lakshmikantham, Chairman
Department of Mathematics
Applications must be filed by April 15, 1972

- Fellowship (1) 3000 9
- Teaching Assistantship (16) 2600-3000 9

University of Rhode Island

KINGSTON, RHODE ISLAND 02881
William J. Hemmerle, Chairman
Department of Computer Science and Experimental Statistics
Applications must be filed by April 15, 1972

- Teaching Assistantship (4) 2600-2800 9 20
- Research Assistantship (8) 2600-2800 9 20

1202
The Citadel
CHARLESTON, SOUTH CAROLINA 29409
George E. Reves, Head
Department of Mathematics
Applications must be filed by July 1, 1972
NSF Institute (30) 30-200* 9 150
*Books and travel allowance

Clemson University
CLEMSON, SOUTH CAROLINA 29631
John Kenelly, Head
Department of Mathematical Sciences
Applications must be filed by March 1, 1972
Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (2); geometry and topology (4); analysis and functional analysis (6); probability and statistics (1). TOTAL 13.

Fellowship (5) *
Teaching Assistantship (60) 3660-4020 12 90/sem. 3-6 Teaching
Research Assistantship (6) 3260-3660 12 90/sem.

*$2400 for first-year graduate students; $2600 for second-year graduate students; $2800 for third-year graduate students plus $500 per dependent.

THE MATHEMATICS DEPARTMENT OF
THE UNIVERSITY OF SOUTH CAROLINA
IS NOW ACCEPTING APPLICATIONS FOR
teaching assistantships for the 1972-1973 academic year
STIPENDS RANGE FROM $2800 TO $4000
FOR
SIX HOURS CLASSROOM TEACHING OR EQUIVALENT
DEGREE PROGRAMS
The programs offered lead to the Master of Arts in Teaching Mathematics, Master of Mathematics, Master of Arts, Master of Science and Doctor of Philosophy degrees. The student’s program of study is arranged after individual consultation; the master’s program, in particular, is adaptable to a variety of objectives. Doctoral research direction is available in algebra, analysis, applied mathematics, probability and statistics, topology, number theory, logic and foundations. Careful attention will be given to initial advisement and to starting each student in a program commensurate with his training and competence.
Completed applications should be in the Graduate School Office by March 1. All inquiries are welcome and should be sent to:

Director
Graduate Studies in Mathematics
Department of Mathematics
University of South Carolina
Columbia, South Carolina 29208
<table>
<thead>
<tr>
<th>University of South Carolina</th>
</tr>
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<tbody>
<tr>
<td>COLUMBIA, SOUTH CAROLINA 29208</td>
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<tr>
<td>James H. Wahab, Head</td>
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<td>Department of Mathematics</td>
</tr>
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<td>Applications must be filed by March 1, 1972</td>
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Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (6); logic (1); analysis and functional analysis (2). TOTAL 9.

Teaching Assistantship (70) 2800-4000 9 30/sem. 6 Teaching

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<td>ROCK HILL, SOUTH CAROLINA 29730</td>
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<td>B. G. Hodges, Chairman</td>
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Teaching Assistantship (3) 2400-2800 9 payable 6 Teaching

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<tr>
<td>RAPID CITY, SOUTH DAKOTA 57701</td>
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<tr>
<td>Dean C. Benson, Head</td>
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<td>Department of Mathematics</td>
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<td>Applications must be filed by April 1, 1972*</td>
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Teaching Assistantship (6) 2600 9 5 sem. hr. 4-5 Teaching
Research Assistantship (1) 2800 9 5 sem. 18 Research

*Late applications will be considered if vacancies exist.

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<th>South Dakota State University</th>
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<tr>
<td>BROOKINGS, SOUTH DAKOTA 57006</td>
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<tr>
<td>J. Ernest Richards, Acting Head</td>
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Teaching Assistantship (2) 2500-2800 9 5/cr. 6 Teaching

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<tr>
<td>CLARKSVILLE, TENNESSEE 37040</td>
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<td>William G. Stokes, Chairman</td>
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<td>Department of Mathematics</td>
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Teaching Assistantship (5) 1500 9 200 3 Teaching
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<td></td>
<td>hours per week</td>
<td>type of service</td>
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**East Tennessee State University**

JOHNSON CITY, TENNESSEE 37601
Lester C. Hartsell, Chairman
Department of Mathematics
Applications must be filed by April 30, 1972

Teaching Assistantship (6)  1800–2025  9

**Memphis State University**

MEMPHIS, TENNESSEE 38111
H. S. Kaltenborn, Chairman
Department of Mathematics
Applications must be filed by March 1, 1972

Teaching Assistantship (20) 2200-2500  9

**Middle Tennessee State University**

MURFREESBORO, TENNESSEE 37130
Harold S. Spraker, Chairman
Department of Mathematics
Applications must be filed by April 15, 1972

Teaching Assistantship (8) 2160  9

**Tennessee Technological University**

COOKEVILLE, TENNESSEE 38501
Ralph C. Boles, Chairman
Department of Mathematics
Applications deadline is open

Teaching Assistantship (10) 2250–2475  9

**University of Tennessee**

KNOXVILLE, TENNESSEE 37916
H. T. Mathews, Head
Department of Mathematics
Applications must be filed by April 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (5); geometry and topology (2); analysis and functional analysis (7); probability (2); numerical analysis (2); topological algebra (2). TOTAL 20.

Fellowship (5)  1600–3600  12  15/qtr.
Teaching Fellowship (5) 2600–4600  12  15/qtr.  3–4 Teaching
Teaching Assistantship (52) 1600–3700  9  15/qtr.  3–8 Teaching

**Vanderbilt University**

NASHVILLE, TENNESSEE 37203
B. F. Bryant, Chairman
Department of Mathematics
Applications must be filed by February 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (3); geometry and topology (4); analysis and functional analysis (5); computer science and numerical analysis (1). TOTAL 11.

Fellowship (6)  2400–2800  12
Teaching Fellowship (20) 3000–3600  9
Scholarship (2) varies
M.A.T. (2)
Vanderbilt University

NASHVILLE, TENNESSEE 37203
Charles Federspiel, Director
Division of Biostatistics, School of Medicine
Applications must be filed by March 1, 1972

Traineeship (4) 200-250 12

Vanderbilt University

NASHVILLE, TENNESSEE 37203
W. H. Rowan, Jr., Chairman
Department of Systems and Information Science
Applications must be filed by February 15, 1972

Teaching Fellowship (3) 2400-5200 9 2800 6 Teaching

TENNESSEE

Baylor University

WACO, TEXAS 76703
H. L. Rolf, Chairman
Department of Mathematics
Applications must be filed by March 1, 1972

Graduate Assistantship (4) 1500 9

East Texas State University

COMMERCE, TEXAS 75428
Dale R. Bedgood, Head
Department of Mathematics
Applications must be filed by April 1, 1972

Teaching Assistantship (14) 2700-3200 9 107 6 Teaching

East Texas State University

COMMERCE, TEXAS 75428
Alton R. Goddard, Head
Department of Computer Science
Applications must be filed by August 1, 1972

Teaching Assistantship (3) 2700 9 115* 6
Research Assistantship (3) 2025 9 115* 15

*$115 for twelve semester hours for residents; $545 for nonresidents

Midwestern University

WICHITA FALLS, TEXAS 76308
Louie C. Huffman, Chairman
Department of Mathematics
Applications must be filed by May 1, 1972

Teaching Assistantship (6) 2700 9 100/acad. yr. 6 Teaching

NUMBER OF DEGREES AWARDED IN 1971
Master's degrees by department 3
Baccalaureate degrees by department 10
Baccalaureate degrees by institution 1072
Baccalaureate degrees by department 41
Master's degrees by department 4

NUMBER OF DEGREES AWARDED IN 1971
Baccalaureate degrees by institution 1496
Baccalaureate degrees by department 22
Master's degrees by department 17
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<td>Frank Connor, Chairman</td>
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<td>Sam Houston State University</td>
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<td>HUNTSVILLE, TEXAS 77340</td>
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<td>Glen E. Mattingly, Director</td>
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**NUMBER OF DEGREES AWARDED IN 1971**

| Baccalaureate degrees by institution | 2130 |
| Baccalaureate degrees by department | 41 |
| Master's degrees by department      | 8   |

| Baccalaureate degrees by institution | 464 |
| Baccalaureate degrees by department | 61 |
| Master's degrees by department      | 6   |

| Baccalaureate degrees by institution | 750 |
| Baccalaureate degrees by department | 25 |
| Master's degrees by department      | 3   |

| Baccalaureate degrees by institution | 1531 |
| Baccalaureate degrees by department | 41 |
| Master's degrees by department      | 7   |

1207
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<td>(with number anticipated in 1972-1973)</td>
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</table>

### Southern Methodist University

**DALLAS, TEXAS 75222**  
David W. Starr, Chairman  
Department of Mathematics  
Applications must be filed by March 15, 1972

- Teaching Assistantship (7)  
  - Stipend: 2200-3300  
  - 9 hours per week

**NUMBER OF DEGREES AWARDED IN 1971**  
- Baccalaureate degrees by institution: 1229  
- Baccalaureate degrees by department: 44  
- Master's degrees by department: 8

### Southern Methodist University

**DALLAS, TEXAS 75222**  
Robert R. Korfhage, Director  
Computer Science/Operations Research Center  
Applications must be filed by March 1972

- Ph. D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (4); applied mathematics (3). **TOTAL 7.**
- Fellowship (4)  
  - Teaching Assistantship (16)  
    - Stipend: 3600-4050  
    - 9 hours per week
  - Research Assistantship (12)  
    - Stipend: 4800-4950  
    - 12 hours per week

**NUMBER OF DEGREES AWARDED IN 1971**  
- Master's degrees by department: 35

### Southern Methodist University

**DALLAS, TEXAS 75222**  
Pau l D. Minton, Chairman  
Department of Statistics  
Applications must be filed by April 15, 1972

- Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (26). **TOTAL 26.**
- Fellowship (10)  
  - Stipend: 2400-2800*  
  - 12 months
- Scholarship (7)  
  - Stipend: 3050  
  - 9 months

*Plus dependent's allowance of $500 each for 12 months

### Southwest Texas State University

**SAN MARCOS, TEXAS 78666**  
Robert A. Northcutt, Chairman  
Department of Mathematics  
Applications must be filed by May 1, 1972

- Teaching Assistantship (14)  
  - Stipend: 3000  
  - 9 months

**NUMBER OF DEGREES AWARDED IN 1971**  
- Baccalaureate degrees by institution: 1883  
- Baccalaureate degrees by department: 89  
- Master's degrees by department: 8

### Stephen F. Austin State University

**NACOGDOCHES, TEXAS 75961**  
W. I. Layton, Head  
Department of Mathematics  
Applications must be filed by February 1, 1972*

- Teaching Assistantship (12)  
  - Stipend: 1500-3000  
  - 9 months

**NUMBER OF DEGREES AWARDED IN 1971**  
- Baccalaureate degrees by institution: 1196  
- Baccalaureate degrees by department: 58  
- Master's degrees by department: 5

*Late applications will be considered if vacancies exist.  
**Out-of-state tuition is waived.**
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**Texas A & I University**

KINGSVILLE, TEXAS 78363  
Virgil C. Kowalik, Chairman  
Department of Mathematics  
Applications must be filed by April 15, 1972

Teaching Assistantship (13) 2700 9 6

**Texas A & M University**

COLLEGE STATION, TEXAS 77843  
G. R. Blakley, Head  
Department of Mathematics  
Applications must be filed by April 15, 1972

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (4); analysis and functional analysis (2); applied mathematics (2). TOTAL 8.

| Fellowship (3) | 2925-3375 9 | 50* | 6 | Teaching |
| Teaching Assistantship (45) | 2925-3375 9 | ** | 10 | Departmental duties |
| Nonteaching Assistantship (5) | 2925-3375 9 | | | |
| NSF or NASA Grant (5) | 2400-2600 12 | | | |

*$200 nonresident  
**Nonresident tuition waived

---

**TEXAS A & M UNIVERSITY**

The Department of Mathematics of Texas A & M University offers programs leading to the M.S. and Ph.D. degrees. A student has great flexibility in choosing a program to meet his interests.

Faculty members are active in research in many fields of pure and applied mathematics from topology to numerical analysis. The library and computing facilities are outstanding.

Financial assistance is available.

For more information write:

Professor G. R. Blakley, Head  
Department of Mathematics  
TEXAS A & M UNIVERSITY  
College Station, Texas 77843

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1209
Texas A & M University

COLLEGE STATION, TEXAS 77843
H. O. Hartley, Director
Institute of Statistics
Applications must be filed by April 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (23), TOTAL 23.

Fellowship** (2) 325-375 9 payable 20
Teaching Assistantship ** (12) 325-375 9 payable 20
Research Assistantship (15) 325-375 12 payable 20

*Later applications may be accepted.
**Summer assistantships may be available for Fellowship and Teaching Assistantship holders.

Texas Christian University

FORT WORTH, TEXAS 76129
Landon A. Colquitt, Chairman
Department of Mathematics
Applications must be filed by March 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (3); geometry and topology (6); analysis and functional analysis (7). TOTAL 16.

Teaching Fellowship (10) 2400-3600 12 3 Teaching
Teaching Assistantship (6) 1200-2800 9 3-6 Teaching
Scholarship (3) 5 Research

Texas Southern University

HOUSTON, TEXAS 77004
Jlayron L. Clarkson, Head
Department of Mathematics
Applications deadline is open

Teaching Assistantship (2) 1350-2700 9 60 6 Teaching

Texas Tech University

LUBBOCK, TEXAS 79409
H. L. Gray, Chairman
Department of Mathematics
Applications must be filed by March 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (4); geometry and topology (1); analysis and functional analysis (3); probability and statistics (4); computer science and numerical analysis (4). TOTAL 16.

Teaching Assistantship (65) 2600-3400 9 50/sem. 6 Teaching

Trinity University

SAN ANTONIO, TEXAS 78284
Peter Terwey, Jr., Chairman
Department of Mathematics
Applications must be filed by March 1, 1972

Assistantship (2) 2500 9 1160 10 Tutorial
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<td>amount in dollars</td>
<td>9 or 12 months</td>
<td>if not included in stipend (dollars)</td>
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<td>(with number anticipated in 1972-1973)</td>
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**University of Houston**

HOUSTON, TEXAS 77004  
J. N. Younglove, Chairman  
Department of Mathematics  
Applications must be filed by April 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (4); geometry and topology (11); analysis and functional analysis (2). TOTAL 17.

- NSF Fellowship (2) 2400-3600 12
- Teaching Assistantship (40) 2250-2700 9

**University of Houston**

HOUSTON, TEXAS 77004  
L. Duane Pyle, Chairman  
Department of Computer Science  
Applications must be filed by March 15, 1972

Teaching Assistantship (15) 270-300 9 50 20 Teaching
Research Assistantship (8) 270-300 9 20 Research

**University of Texas at Arlington**

ARLINGTON, TEXAS 76010  
Basil M. Wall, Chairman  
Department of Mathematics  
Applications must be filed by March 15, 1972

Teaching Assistantship (23) 2700 9 60/sem. 6 Teaching

**University of Texas at Austin**

AUSTIN, TEXAS 78712  
Leonard Gillman, Chairman  
Department of Mathematics  
Applications must be filed by February 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (8); geometry and topology (7); analysis and functional analysis (36); probability and statistics (1); computer science and numerical analysis (6); applied mathematics (1); others (2). TOTAL 61.

- Fellowship (15) 1950-3900 9 & 12
- Teaching Fellowship (4) 3000-3200 9
- Teaching Assistantship (100) 2800-3600 9 121/sem. 20
- Research Assistantship (6) 5520-6780 12 121/sem. 30-40
- Assistant Instructorship (40) 4000-6000 9 121 20-30

**University of Texas at Austin**

AUSTIN, TEXAS 78712  
J. C. Browne, Chairman  
Department of Computer Sciences  
Applications must be filed by February 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: logic (1); computer science and numerical analysis (15). TOTAL 16.

- Fellowship (3) 20 Teaching
- Teaching Assistantship (15) 2500-4000 9
- Research Assistantship (7) 12

1211
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### University of Texas at Austin

**AUSTIN, TEXAS 78712**

Gaylord A. Jentz, Chairman
Department of General Business

Applications must be filed by Spring 1972

Ph.D. degrees awarded during last three years by field of specialization:
- analysis and functional analysis (3); probability and statistics (7); computer science and numerical analysis (5). TOTAL 15.

#### Teaching Assistantship
- 5000–7600
- 9 hours
- 10–12 Teaching

### University of Texas at El Paso

**EL PASO, TEXAS 79968**

Carl E. Hall, Chairman
Department of Mathematics

Applications must be filed by March 1, 1972

#### Teaching Assistantship (10)
- 2500
- 9 hours
- 100/sem. 20 Teaching assistance

### West Texas State University

**CANYON, TEXAS 79105**

Hollis L. Cook, Head
Department of Mathematics

Applications must be filed by April 1, 1972

#### Teaching Assistantship (10)
- 2700
- 9 hours
- in-state 15

### Brigham Young University

**PROVO, UTAH 84601**

Kenneth L. Hillam, Chairman
Department of Mathematics

Applications must be filed by March 1, 1972

#### Teaching Assistantship (35)
- 1325–2700
- 9 hours

#### Research Assistantship (3)
- 1000
- 9 hours

#### Scholarship (2)
- 600
- 9 hours

#### NSF (1)
- 2400–3400
- 9 hours

### Brigham Young University

**PROVO, UTAH 84601**

H. Gill Hilton, Chairman
Department of Statistics

Applications must be filed by March 1, 1972

#### Fellowship (1)
- 2400
- 9 hours

#### Teaching Assistantship (12)
- 1890–2700
- 9 hours

#### Scholarship (1,5)
- Tuition
- 9 hours

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1212
### University of Utah

SALT LAKE CITY, UTAH 84112  
Department of Mathematics  
C. E. Burgess, Chairman  
Applications must be filed by March 15, 1972

**Ph. D. degrees awarded during last three years by field of specialization:**  
- algebra and number theory (2)  
- geometry and topology (2)  
- analysis and functional analysis (10)  
- computer science and numerical analysis (6).  
**TOTAL 20.**

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### Utah State University

LOGAN, UTAH 84321  
Lawrence O. Cannon, Head  
Department of Mathematics  
Applications must be filed by April 1, 1972

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<th>Type of service</th>
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### Utah State University

LOGAN, UTAH 84321  
Rex L. Hurst, Head  
Department of Applied Statistics and Computer Science  
Applications must be filed by March 1, 1972

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### University of Vermont

BURLINGTON, VERMONT 05401  
N. James Schoonmaker, Chairman  
Department of Mathematics

**Number of degrees awarded in 1971**  
- Baccalaureate degrees by institution: 1875  
- Baccalaureate degrees by department: 73  
- Master's degrees by department: 3  

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*Plus $500 per dependent*
VIRGINIA

College of William and Mary
WILLIAMSBURG, VIRGINIA 23185
Thomas L. Reynolds, Chairman
Department of Mathematics
Applications must be filed by March 15, 1972

Teaching Assistantship (5)  2700  9
Scholarship (4)  500–2000  9

Radford College
RADFORD, VIRGINIA 24141
Joseph C. Nichols, Chairman
Department of Mathematics and Statistics

Fellowship (2)  1800  9
Teaching Assistantship (2)  1000  9
Other (2)  1800  9

University of Virginia
CHARLOTTESVILLE, VIRGINIA 22903
Marvin Rosenblum, Chairman
Department of Mathematics
Applications must be filed by February 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (1); geometry and topology (11); analysis and functional analysis (5). TOTAL 17.

Fellowship (15)  2400–3400  550–1050  6  Research
Teaching Assistantship (16)  3300–3750  550–1050  6  Teaching

Ph.D. degrees awarded during last three years by field of specialization: analysis and functional analysis (4); computer science and numerical analysis (3); applied mathematics (2). TOTAL 9.

Fellowship (12)  2400–2650  9  payable 6  Lecturing
Teaching Assistantship (8)  2800–3000  9  payable 18–20
Research Assistantship (12)  2700–3000  9  payable 18–20
Other (2)  2400–3000  9  payable 18–20

Virginia Commonwealth University
RICHMOND, VIRGINIA 23220
William A. Glynn, Chairman
Department of Mathematical Sciences
Applications must be filed by March 15, 1972

Teaching Assistantship (8–10)  3000–3200  9  430  6  Lab-tutorial
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**Virginia Commonwealth University**

RICHMOND, VIRGINIA 23219  
S. J. Kilpatrick, Jr., Chairman  
Department of Biometry  
Applications must be filed by April 1, 1972

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**Virginia Polytechnic Institute and State University**

BLACKSBURG, VIRGINIA 24061  
C. Wayne Patty, Head  
Department of Mathematics  
Applications must be filed by March 1, 1972

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Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (3); geometry and topology (5); analysis and functional analysis (1); applied mathematics (1). TOTAL 10.

| Fellowship (3) | 2400-2800 | 12 | Teaching Assistantship (40) | 3060-3465 | 9 | 597 | 6 |

**Virginia Polytechnic Institute and State University**

BLACKSBURG, VIRGINIA 24061  
George W. Goraline, Head  
Department of Computer Science  
Applications must be filed by April 1, 1972

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| Teaching Assistantship (2) | 330 | 9 | 20 | Teaching |
| Research Assistantship (2) | 300 | 9 | 20 | Research |

**Virginia Polytechnic Institute and State University**

BLACKSBURG, VIRGINIA 24061  
Boyd Harshbarger, Head  
Department of Statistics  
Applications must be filed by February, 1972

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<th>NUMBER OF DEGREES AWARDED IN 1971</th>
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Ph.D. degrees awarded during last three years by field of specialization: probability and statistics (25). TOTAL 25.

| Fellowship (28) | 2400-3300 | 12 | 2400-3300 | 12 | 696.50 | 6 |
| Teaching Assistantship (7) | 3080-3465 | 9 | 696.50 |
| Research Assistantship (2) | 3080-3465 | 9 | 696.50 | 15 |

**GEORGE MASON COLLEGE OF THE UNIVERSITY OF VIRGINIA**

**ANNOUNCES**

**MASTER OF SCIENCE IN MATHEMATICS**

Graduate instructorships from $3300 to $3750.

The College is located in the Washington, D. C., Metropolitan area. The graduate courses are offered in late afternoon—early evening hours.

Write:  
Admissions Office, Graduate Division  
George Mason College of the University of Virginia  
4400 University Drive  
Fairfax, Virginia 22030

An Equal Opportunity Employer
Central Washington State College
ELLENSBURG, WASHINGTON 98926
Robert Y. Dean, Chairman
Department of Mathematics
Applications must be filed by February 15, 1972
Teaching Assistantship (4) 175-300 9 169/qtr. 10-20

Eastern Washington State College
CHENEY, WASHINGTON 99004
Hugh D. Sullivan, Chairman
Department of Mathematics
Applications must be filed by March 15, 1972
Fellowship (2) 2400-2600* 12 20
Teaching Assistantship (6) 2700 9 169/qtr. Teaching
*Plus $500 per dependent

Gonzaga University
SPOKANE, WASHINGTON 99202
John Firkins, Chairman
Department of Mathematics
Applications must be filed by March 15, 1972
Teaching Assistantship (1) 2000 9 6 Teaching
Scholarship (1) Tuition

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (11); geometry and topology (12); logic (1); analysis and functional analysis (11); probability and statistics (1); computer science and numerical analysis (1); applied mathematics (2); combinatorics (1). TOTAL 40.

University of Washington
SEATTLE, WASHINGTON 98195
Ross A. Beaumont, Chairman
Department of Mathematics
Applications must be filed by March 1, 1972
Ph. D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (6). TOTAL 6.

Washington State University
PULLMAN, WASHINGTON 99163
O.W. Rechard, Chairman
Department of Computer Science
Applications must be filed by March 1, 1972
Ph. D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (6). TOTAL 6.
Western Washington State College

BELLEINGHAM, WASHINGTON 98225
Albert Froderberg, Chairman
Department of Mathematics
Applications must be filed by April 1, 1972

Teaching Assistantship (14) 2700 9 169/qtr. One course

WISCONSIN

Marquette University

MILWAUKEE, WISCONSIN 53233
C. C. Braunschweiger, Chairman
Department of Mathematics
Applications must be filed by March 1, 1972

Teaching Assistantship (11) 2400-2800 9 12-20 Teaching
Research Assistantship (1) 2400-2600 9 12-20 Teaching or Research
NSF Traineeship (1) 2400-2800 12 12-20 Teaching and Research

University of Wisconsin

MADISON, WISCONSIN 53706
Wolfgang Wasow, Chairman
Department of Mathematics
Applications must be filed by January 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (27); geometry and topology (21); logic (7); analysis and functional analysis (37); probability and statistics (4); computer science and numerical analysis (2); applied mathematics (1); mathematics education (1); number theory and mathematics education (1); history of science and mathematics (1). TOTAL 104.

Fellowship (29) 1500-5000 9-12 varies Half-time Teaching
Teaching Assistantship (128) 3300-4113 9 Half-time Research
Research Assistantship (19) 3105 9 Half-time Research
MRC Regular (8) 2400-2800* 12 Research towards Ph. D.
MRC R. E. Langer (2) 3400-3800* 12 Research towards Ph. D.

*Plus $500 for each dependent

University of Wisconsin

MADISON, WISCONSIN 53706
G. E. Collins, Chairman
Department of Computer Sciences
Applications must be filed by November 15, 1971 and January 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (15). TOTAL 15.

Fellowship (10) 2700 12 12
(3/8) Teaching Assistantship (23) 2970 9 65 15 Teaching
(1/2) Teaching Assistantship (20) 3960 9 65 20 Teaching
Research Assistantship (25) 2900 9 410 20 Research
NSF (8) 2400 9
Project Assistant (40) * 410
MRC Fellowship (6) 2400 12

*Individually arranged
University of Wisconsin

MADISON, WISCONSIN 53706
J. Barkley Rosser, Director
Mathematics Research Center
Applications must be filed by January 15, 1972

Fellowship (10) 2400-2800* 12
R. E. Langer Fellowship (2) 3400-3800* 12

*Stipends increased by $500 for each dependent

University of Wisconsin

MADISON, WISCONSIN 53706
Norman R. Draper, Chairman
Department of Statistics
Applications must be filed by January 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (22). TOTAL 22.

Fellowship (4) 2600-3500* 9-12
Teaching Assistantship (25) 3360-4113 9
Research Assistantship (15) 3100-3500 9
Scholarship (8) 2600-3500* 9
Summer (30) 700

*Plus dependency allowance

University of Wisconsin - Eau Claire

EAU CLAIRE, WISCONSIN 54701
Lawrence F. Wahlstrom, Chairman
Department of Mathematics
Applications must be filed by March 1, 1972

Teaching Assistantship (2) 2500 9
Scholarship (2) 200-500 9

*$1700 nonresident

University of Wisconsin - Milwaukee

MILWAUKEE, WISCONSIN 53201
Richard Gantos, Chairman
Department of Mathematics
Applications must be filed by February 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (6); geometry and topology (1); analysis and functional analysis (4); applied mathematics (1). TOTAL 12.

NSF or NDEA Fellowship (4) 1800-2100 9 9 Research
Combined Appointment (4):
Teaching Assistantship 750-2056 9 3-4 Teaching
NSF or NDEA Fellowship 2000-2100 9 6-9 Research
Teaching Assistantship (60) 3896-4113 9 640 6 Teaching
University of Wisconsin-Whitewater

WHITEWATER, WISCONSIN 53190
C. E. Flanagan, Chairman
Department of Mathematics
Applications must be filed by July 15, 1972

Graduate Assistantship (1) 2500 9

*Plus $24.77 per credit for 8 or fewer hours

University of Wyoming

LARAMIE, WYOMING 82070
J. Ray Hanna, Acting Head
Department of Mathematics
Applications must be filed by February 15, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (4); logic and algebra (1); computer science and numerical analysis (1); applied mathematics (1). TOTAL 7.

Teaching Assistantship (25) 2898-3861 9

CANADA

Acadia University

WOLFWILLE, NOVA SCOTIA, CANADA
K. D. C. Haley, Chairman
Department of Mathematics

Research Assistantship (6) 2000-2500 9
Scholarship (1) 3000 9
Dalhousie University

HALIFAX, NOVA SCOTIA, CANADA
Arnold J. Tingley, Chairman
Department of Mathematics
Applications deadline is open

Ph. D. degrees awarded during last three years by field of specialization: geometry and topology (4); logic (1); analysis and functional analysis (3); computer science and numerical analysis (1). TOTAL 9.

Teaching Fellowship (10) 3600-5000 12 720 6
Teaching Assistantship (20) 3000-4000 12 720 6
Scholarship (3) 3600-4000 12 720

Lakehead University

THUNDER BAY, ONTARIO, CANADA
Clement F. Kent, Chairman
Department of Mathematical Sciences
Applications must be filed by August 1972

Teaching Assistantship 1800-3600 12 500 4-15

McMASTER UNIVERSITY

HAMILTON, ONTARIO, CANADA
CHAIRMANSHIP

Applications are invited for the position of Professor and Chairman of the Department of Mathematics beginning July 1, 1972; salary dependent on qualifications.

The Department (22 members) offers graduate work at the M.Sc. and Ph.D. levels. Interested candidates should write to:

Dr. D. R. McCalla
Dean of the Faculty of Science
McMASTER UNIVERSITY
Hamilton 16, Ontario, Canada
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<td>W. J. Blundon, Head</td>
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<td>Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (5); geometry and topology (1); analysis and functional analysis (3); applied mathematics (3). TOTAL 12.</td>
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<td>Queen's University at Kingston</td>
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<td>KINGSTON, ONTARIO, CANADA</td>
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<td>Albert John Coleman, Head</td>
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<td>Department of Mathematics and Statistics</td>
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<td>500</td>
<td>10</td>
<td>Teaching</td>
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The Mathematics Department of Memorial University of Newfoundland offers graduate programs in a variety of fields leading to the M.A., M.Phil., and Ph.D. degrees. The recently developed Ph.D. program is concentrated in the areas of Algebraic and Differential Topology, General Topology, Homological Algebra, Category Theory, and Differential Geometry. The small number of graduate students makes for an extremely favorable student/faculty ratio and offers the graduate student an unusual amount of personal attention. A limited number of fellowships (from $3,000 to $3,600) is available.

For further information and applications for admission and financial support write to:

Professor W. J. Blundon
Department of Mathematics
Memorial University of Newfoundland
St. John's, Newfoundland, Canada

1221
Simon Fraser University

BURNABY 2, BRITISH COLUMBIA, CANADA

R. W. Lardner, Acting Head
Department of Mathematics

Applications must be filed by April 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: logic (2). TOTAL 2.

Teaching Assistantship (20) 2606–3060 8* 150/sem.** 15 Teaching
Research Assistantship (5) 3180 12 150/sem.** Research
Scholarship (5) 3800 12 150/sem.**

*Many extendable to 12 months with $1060 research assistantship

**Fees reduced to $20 per semester in second year of graduate studies

Université de Montréal

MONTREAL 101, QUÉBEC, CANADA

Aubert Daigleault, Chairman
Department of Mathématiques

Applications must be filed by April 30, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (2); geometry and topology (1); logic (1); analysis and functional analysis (5); probability and statistics (3).

TOTAL 12.

Fellowship (25) 3000–5000 12 5–10 Teaching
Teaching Fellowship* (10) 3000–5000 9
Teaching Assistantship (15) 1200–3500 9
Research Assistantship (30) 3000–5000 12
Scholarship (15) 1000–5000 12
Other (5) 69 3–6 Full-time

*Outside

Université de Sherbrooke

SHERBROOKE, QUÉBEC, CANADA

Jean-Pierre Samson, Chairman
Department of Mathematics

Applications must be filed by March 1, 1972

Teaching Fellowship (3) 600–1200 9 550 3
Teaching Assistantship (1) 2000–4000 9 3–6
Research Assistantship (2) 2000–4000 9

University of Alberta

EDMONTON, ALBERTA, CANADA

S. G. Ghurye, Chairman
Department of Mathematics

Applications must be filed by March 1, 1972

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (4); geometry and topology (5); analysis and functional analysis (4); probability and statistics (1); applied mathematics (2). TOTAL 16.

Fellowship (4) 3600–5000 12 3200 2 Teaching
Teaching Fellowship (8) 4200–4800 12
Teaching Assistantship (35) 3000–4600 8–12
Research Assistantship (5) 3180–4180 12 2 Teaching
University of Alberta

EDMONTON, ALBERTA, CANADA

J. P. Penny, Acting Chairman
Department of Computing Science
Applications must be filed by March 1, 1972

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<tr>
<td>Master's degrees by department</td>
<td>3200-3800</td>
<td>12</td>
<td>Research</td>
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</tbody>
</table>

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (10); geometry and topology (3); logic (1); analysis and functional analysis (14); applied mathematics (1). TOTAL 29.

University of British Columbia

VANCOUVER, BRITISH COLUMBIA, CANADA

R. D. James, Head
Department of Mathematics
Applications must be filed by March 15, 1972

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<th>TYPE of financial assistance</th>
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<tr>
<td>Master's degrees by department</td>
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<td>Research</td>
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</table>

Ph.D. degrees awarded during last three years by field of specialization: analysis and functional analysis (3); computer science and numerical analysis (2); combinatorics (1). TOTAL 6.

University of Calgary

CALGARY 44, ALBERTA, CANADA

H. K. Farahat, Head
Department of Mathematics, Statistics & Computing Science*
Applications should be filed by April 30, 1972

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<th>TYPE of financial assistance</th>
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<tr>
<td>Master's degrees by department</td>
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</table>

Ph.D. degrees awarded during last three years by field of specialization: analysis and functional analysis (3); computer science and numerical analysis (2); combinatorics (1). TOTAL 6.

*The Divisions of Statistics, Pure Mathematics, Applied Mathematics, and Computing Science have all been combined in this listing.
THE UNIVERSITY OF CALGARY
Graduate Study in Pure & Applied Mathematics, Statistics & Computing Science

This rapidly expanding University is situated within easy access to beautiful recreation areas in the Rocky Mountains. The library already has over 350,000 volumes and subscribes to over 7,000 periodicals including over 250 mathematical periodicals with back runs.

The Department offers programmes leading to the M.A., M.Sc., and Ph.D. degrees. Graduate programmes within the Department are administered by the four divisions of Pure Mathematics, Applied Mathematics, Statistics, and Computing Science. There are presently about 60 faculty members in the Department with active research interests in algebra, analysis, functional analysis, topology, continuum mechanics, numerical analysis, field theory probability, stochastic processes, artificial intelligence, automata theory, algorithmic languages, machine logic.

Teaching and research assistantships are available in the Department and each applicant for graduate study will be considered for these. The average stipend is $3,400 for the 8-month session and fees are generally waived. In addition, students working on their programme during the summer months may receive an additional $1,060.

For further information and details write to

The Director of Graduate Studies
Department of Mathematics,
Statistics and Computing Science
The University of Calgary
CALGARY 44, Alberta, Canada
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<th>TYPE</th>
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<td>of financial assistance</td>
<td>amount in dollars</td>
<td>9 or 12 months</td>
<td>if not included in stipend (dollars)</td>
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<td>(with number anticipated in 1972-1973)</td>
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**University of New Brunswick**

FREDERICTON, NEW BRUNSWICK, CANADA

Brian Tupper, Head
Department of Mathematics
Applications must be filed by March 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (1). TOTAL 1.

| Fellowship (10) | 2000-2500 | 9 | 500 | 6 | Grading |
| Teaching Fellowship (1) | 2500 | 9 | 500 | 3 | Teaching |
| Research Assistantship (6) | 1000-2400 | 9 | 500 | 6 | Research |

**University of New Brunswick**

FREDERICTON, NEW BRUNSWICK, CANADA

W. Dana Wasson, Head
Department of Computer Science
Applications must be filed by March 31, 1972

Fellowship (3) | 2000-3000 | 530 |
Teaching Assistantship (6) | 2000-2500 | 8 | 530 | 8 | Teaching |
Research Assistantship (8) | 2000-2500 | 8 | 530 | 8 | Research |
Summer Assistantship (4) | 1000 | 4 | 8 | Research & Teaching |

**University of Ottawa**

OTTAWA, ONTARIO, KIN 6N5, CANADA

V. Linis, Chairman
Department of Mathematics
Applications must be filed by June 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: geometry and topology (1); analysis and functional analysis (1). TOTAL 2.

| Fellowship (4) | 2500 | 12 | 250 | 6 |
| Teaching Assistantship (10) | 1800 | 12 | 250 | 6 |

**University of Saskatchewan, Regina**

REGINA, SASKATCHEWAN, CANADA

I. Mc Donald, Chairman
Department of Mathematics
Applications must be filed by March 31, 1972

Ph.D. degrees awarded during last three years by field of specialization: logic (1). TOTAL 1.

| Teaching Fellowship (2) | 4400 | payable | 10 | Teaching |
| Teaching Assistantship (1) | 3300 | payable | 10 | Conducting tutorials |
| Research Assistantship (2) | 3100 | payable |
| Scholarship (3) | 3000 | payable |
University of Toronto

G, F. D. Duff, Chairman
Department of Mathematics
Applications must be filed by March 15, 1972
Ph. D. degrees awarded during last three years by field of specialization: geometry and topology (4); analysis and functional analysis (12); probability and statistics (7); computer science and numerical analysis (2); applied mathematics (3). TOTAL 28.

Teaching Assistantship (30) 3800-4000 12 485* 4 Tutoring
Scholarship (60) 3200-5000 12 485*

*Plus incidental fees of $40 for men and $20 for women

University of Toronto

Thomas E. Hull, Chairman
Department of Computer Science
Applications must be filed by March 15, 1972; December 15 for NRC fellowships
Ph. D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (12). TOTAL 12.

Fellowship (20) 3200-5000 12 485* 4 Teaching
Teaching Fellowship (2) 4700-5300 12 485* 4 Tutoring, Marking
Teaching Assistantship (45) 3925-4525 12 485* 4 Demonstrating
Research Assistantship (20) 3700-4300 12 485*
Scholarship (6) 2250-3000 12 485*

*Plus an incidental fee of $40 for men and $20 for women

University of Waterloo

D. A. Sprott, Dean
Faculty of Mathematics
Applications must be filed by April 15, 1972
Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (3); geometry and topology (1); analysis and functional analysis (4); probability and statistics (4); computer science and numerical analysis (11); applied mathematics (10); combinatorics (11). TOTAL 44.

Teaching Fellowship (187) 900-1800 12 485 5/10 Tutoring/Demonstrating
Teaching Assistantship (76) 100-1000 4 485 Tutoring/Demonstrating
Research Assistantship (99) 300-3150 12 485 Research
Scholarship (60) 1500-5200 12 485 Research
Bursary (11) 1500 12

University of Western Ontario

David Borwein, Head
Department of Mathematics
Ph. D. degrees awarded during last three years by field of specialization: analysis and functional analysis (4); probability and statistics (4); computer science and numerical analysis (4). TOTAL 9.

Teaching Assistantship (10) 1800-2500 8-12 485/yr. 3-6 Tutorials/Marking
Research Assistantship (5) 3180 12 485/yr. 1-6 Research
Scholarship (10) 1500-3800 8-12 485/yr.

This is the situation as of October 1971. It is subject to sudden change and may be more misleading than useful to prospective students. We suggest that interested students contact us directly about awards for 1972-73. Research Assistantships, National and Provincial Scholarships are, in general, not available to students who are in Canada on "Student Visas".
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<td>of financial assistance</td>
<td>amount in dollars</td>
<td>if not included in stipend (dollars)</td>
<td>hours per week</td>
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<td>(with number anticipated in 1972-1973)</td>
<td>9 or 12 months</td>
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**University of Western Ontario**

LONDON 72, ONTARIO, CANADA  
J. H. Blackwell, Head  
Department of Applied Mathematics  
Applications deadline is open

Ph.D. degrees awarded during last three years by field of specialization: applied mathematics (3). TOTAL 3.

This information is so uncertain at the present time that any entry would tend to mislead a student.

**University of Windsor**

WINDSOR 11, ONTARIO, CANADA  
D. T. Faught, Head  
Department of Mathematics  
Applications must be filed by April 1, 1972

Ph.D. degrees awarded during last three years by field of specialization: geometry and topology (1); probability and statistics (4); applied mathematics (2). TOTAL 7.

Teaching Fellowship (25)  
2500-4000  
9  
500  
6-7  
Presiding at tutorials

**York University**

DOWNSVIEW 463, ONTARIO, CANADA  
Donald Solitar, Chairman  
Department of Mathematics  
Applications must be filed by February 15, 1972

Fellowship (2)  
3200-3800  
9  
500  
4  
Research

Teaching Fellowship (2)  
1500-2250  
9-12  
500  
8-10  
Teaching

Teaching Assistantship (18)  
1800  
9  
500  
8-10  
Teaching

Research Assistantship (3)  
3800-4700  
9  
500  
4  
Research
II. STIPENDS FOR STUDY AND TRAVEL

Graduate Support

Ames Laboratory. Graduate assistantships in applied mathematics and computer science. Direct inquiries to Dr. Clair G. Maple, Chief, Mathematics and Computer Science Division, Ames Laboratory of the U.S. Atomic Energy Commission, Iowa State University, Ames, Iowa 50010.

Center for Naval Analyses. 1972 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 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. Write to Mr. Terry D. Harris, Center for Naval Analyses, 1401 Wilson Boulevard, Arlington, Virginia 22209.

Danforth Foundation. Danforth Fellowships. Purpose is to encourage and support persons who intend to study for a Ph.D. in any field of study in the arts and sciences which contributes to a liberal education in preparation for teaching in colleges and universities. Open to seniors or recent graduates of accredited colleges and universities in the United States who are less than 30 years of age and who have not begun any graduate study. Candidates for appointment are restricted to those persons nominated by Liaison Officers (faculty members appointed by college and university presidents) in accredited U.S. undergraduate colleges. Information is available from the Liaison Officer by writing to the Director of the Danforth Fellowship Program, Danforth Foundation, 222 South Central Avenue, St. Louis, Missouri 63105.

Danforth Foundation. Kent Fellowships. Purpose is to encourage and support persons who intend to study for a Ph.D. in any field of study in the arts and sciences which contributes to a liberal education in preparation for teaching or administration in colleges and universities. Open to men and women less than 36 years of age with a minimum of one year of full-time graduate study in a doctoral program at the time of application. A maximum of 50 awards is made. Information is available from the Director of the Kent Fellowship Program, Danforth Foundation, 222 South Central Avenue, St. Louis, Missouri 63105.

General Electric Foundation. Provides research and study grants to selected graduate institutions on a programmed, rotational basis, to be used by the departments in a number of ways, including fellowships and teaching assistantships. Write to J. Moreau Brown, 1255 Boston Avenue, Bridgeport, Connecticut 06602.


Graduate Women in Science. A grant-in-aid, to be given annually by Graduate Women in Science, is available to any woman who holds a degree from a recognized institution of higher learning and has demonstrated outstanding ability and promise in research in one of the mathematical, physical, or biological sciences. The period of the grant shall not exceed one calendar year. The stipend may be applied either directly to the research project or to course work, provided the latter is relevant to the research program. Appointments will be made irrespective of race, nationality, creed, or marital status. Preference will be shown to applicants 35 years of age or older but this limitation is not absolute. Application forms may be obtained from Sr. Mary O'Rourke, Saint Mary College, Leavenworth, Kansas 66048. Applications should be submitted before February 1, 1972. Announcement of recipients will be made April 1, 1972.

Hughes Aircraft Company. Doctoral, Engineer, and Master's Fellowship Programs. Academic training leading to these degrees and correlated experience developed through professional work assignments. Over 100 new awards each year in various fields of engineering, mathematics, and physics. Value of awards, including salary associated with work assignments, ranges from approximately $8,500 to $13,000 annually. Write to Scientific Education Office, Hughes Aircraft Company, P.O. Box 90515, Los Angeles, California 90009.

Humanities Fund, Inc. A Boris A. Bakhmeteff Research Fellowship will be available for the 1971-1972 academic year in an amount up to $4,500. It is intended to be a specific contribution for a definite research project of an original and creative nature in the general field of mechanics of fluids. The recipient shall be a graduate student who is a candidate for the master's or doctor's degree. He shall have no commitment that will interfere with his research work and study on a full-time basis. It is expected that the stipend will be applied principally toward fees, tuition, and subsistence. The study and research may be undertaken at an institution of the Fellow's choice. In the judgment of the committee, the adequacy of the facilities of the institution will have substantial weight in the
selection of the Fellow. Application forms should be filed by February 15, 1972, with Professor James R. Steven, Department of Civil Engineering, School of Engineering, The City College of The City University of New York, New York, New York 10031.

Johns Hopkins University. (1) Financial support for students taking the Ph. D. in mathematical statistics is available in the form of NSF and USPHS traineeships and research assistantships. Inquiries should be addressed to Chairman, Department of Statistics, The Johns Hopkins University, Baltimore, Maryland 21218. (2) USPHS traineeships are available to students seeking the Sc. M., Sc. D., or Ph. D. in biostatistics. Applicants for the biostatistics programs 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.

*Kappa Kappa Gamma Fraternity.* Fellowships. Approximately 14 awards of $500 each are available to women under 30 years of age who may or may not be fraternity members. A bachelor's degree is necessary from an institution where a chapter of Kappa Kappa Gamma is located. U. S. or Canadian citizenship is required. First-year graduate students receive preference. Candidate must receive no more than $1,000 additional financial aid. Application forms are available from Dr. Miriam Locke, Chairman of Fellowships, Kappa Kappa Gamma Fraternity, Box 1484, University, Alabama 35486. Applications must be completed by March 1.

Laboratory Graduate Participation. Opportunity for graduate students working toward master's and doctoral degrees in scientific fields, including mathematics, to use AEC installations at National Bureau of Standards, Oak Ridge National Laboratory, Puerto Rico Nuclear Center, Savannah River Laboratory, and Savannah River Ecology Laboratory for thesis research. U.S. citizenship is required. About 25 appointments are awarded annually. Inquiries may be addressed to University Programs Office, Oak Ridge Associated Universities, P. O. Box 117, Oak Ridge, Tennessee 37830.

Mathematics Research Center. For support of mathematical research of interest to the U.S. Army. Predoctoral fellowships for U.S. citizens for graduate study in any of the Departments of Mathematics, Computer Sciences, Statistics, or School of Business and College of Engineering, at the University of Wisconsin. For information write to J. Barkley Rosser, Director, Mathematics Research Center, University of Wisconsin, Madison, Wisconsin 53706.

National Defense Student Loan Program. Fields unrestricted. Student must be carrying at least one half the normal full-time academic workload as determined by the institution where he is or will be enrolled. Funds are administered by participating institutions, and applications should be made through the Director of Admissions or officer in charge of student financial aid. Other inquiries may be addressed to Division of Student Assistance, Bureau of Higher Education, U.S. Office of Education, Washington, D. C. 20202.

National Science Foundation. Graduate Fellowships. Application may be made by college seniors and those who by fall 1972 will not have completed more than one year of full- or part-time graduate study. An academic year plus two summers will not be considered more than one year of graduate study. Awards will be for periods of three years. Further information and application materials may be obtained from the Fellowship Office, National Research Council, 2101 Constitution Avenue, Washington, D. C. 20418. Applications are due November 29, 1971.

National Science Foundation. Graduate Traineeships are being phased out and only continuation traineeships are budgeted for 1972-1973. Information may be obtained from Deans of Graduate Schools of doctoral-granting institutions. Summer Traineeships for Graduate Teaching Assistants have been suspended.


RCA Fellowships. Grants are for graduate study in computer/information science, computer science, electrical engineering, electronics, and physics. (RCA-NBC Fellowships are available in journalism and telecommunications.) Candidates are selected by appropriate officials in designated universities. Although appointments are for one year, RCA Fellows are eligible for reappointment. For further information write to the RCA Educational Aid Committee, David Sarnoff Research Center, Princeton, New Jersey 08540.

**Shell Merit Fellowships of Shell Companies Foundation, Inc.** For U. S. citizens who are high school teachers of science and mathematics. Tenable at Cornell University during a six-week summer period. Write to Coordinator, Shell Merit Programs, Room 19, Stone Hall, Cornell University, Ithaca, New York 14850.

**Shell Merit Graduate Scholarships at Cornell University.** For graduates of a college or university as National Merit or National Achievement Scholars or finalists who wish to enter or advance their preparation for pre-college science or mathematics teaching. For information write to Coordinator, Shell Merit Programs, Room 19, Stone Hall, Cornell University, Ithaca, New York 14850.

*No current information.

**Discontinued for 1972-1973.**
Smithsonian Institution. Fellowships. For candidates for the Ph. D. or equivalent degree whose departments or universities approve their working at the Smithsonian. Deadline for applications is January 15, 1972. Further information and application forms may be obtained from the Office of Academic Studies, Smithsonian Institution, Washington, D. C. 20560.

U.S. Steel Foundation. Fellowships. A bachelor's degree and U.S. citizenship are required. Applicant must usually be a candidate for a doctor's degree, but master's degree candidates may also be eligible. Sixty-six two-year awards are made through 66 participating colleges and universities for study in the natural and physical sciences, engineering, business administration, humanities, and social sciences. General information may be obtained from the Executive Director, United States Steel Foundation, Inc., 600 Grant Street, Pittsburgh, Pennsylvania 15230.

Zonta International. Amelia Earhart Fellowships. For women holding a bachelor's degree in science and interested in graduate work in aero-space science. Recipients will be granted $3,000, and past recipients may apply for renewed grants. Applications must be filed by February 1, 1972. Write to Zonta International, 59 East Van Buren Street, Chicago, Illinois 60605.

**Postdoctoral Support**

Air Force Office of Scientific Research. Research Contracts and Grants. AFOSR supports research in the mathematical and information sciences under contracts and grants with educational and nonprofit institutions, and under contracts with industrial laboratories. Interested mathematicians and other scientists are encouraged to submit proposals, through their organizations, for research in mathematical and information science fields in which they specialize. It is helpful if proposals to be considered under a given fiscal year, which begins on July 1, are submitted prior to that date. Recipients of support are not required to be U.S. citizens. Research areas of interest include physical mathematics, probability and statistics, numerical analysis, mathematical aspects of system science, control theory, and information science. Research proposals should be forwarded to the Directorate of Mathematical and Information Sciences, Air Force Office of Scientific Research, 1400 Wilson Boulevard, Arlington, Virginia 22209.

Air Force Systems Command. Postdoctoral and Senior Postdoctoral Research Associateships. Awards made in several fields, including mathematics. Tenable at several laboratories in the United States. Applicants should state in some detail their field of specialization. Annual stipend for these appointments is $13,000 for the recent recipient of the doctorate with an adjustment made for the senior candidate. More details regarding this program may be obtained from the Associateship Office, JH 604, National Research Council, 2101 Constitution Avenue, N. W., Washington, D. C. 20418. Deadline for submission of applications is January 15, 1972. Inquiries cannot be processed after January 5, 1972.

American Association of University Women Educational Foundation. Sixty dissertation fellowships for American women, unrestricted as to age or field, to be used abroad or in the United States. Applicants must have fulfilled all requirements for the doctorate except the dissertation by March 1 preceding the fellowship year (July 1-June 30). A few awards also available for postdoctoral research. Application deadline is December 1. Requests for applications should state citizenship and academic level. For further information, write to Fellowships Office, AAUW Educational Foundation, 2401 Virginia Avenue, N. W., Washington, D. C. 20037.

American Philosophical Society. Postdoctoral research grants of small amounts according to need for candidates with Ph. D. or equivalent to aid specific research projects. Tenable abroad and in U. S. Awards made in October, December, February, April, and June. An application must reach the Society's office at least eight weeks in advance of the meeting at which it is to be considered. The Committee on Research meets on the first Friday of February, April, June, October, and December. For information write to the American Philosophical Society, 104 South Fifth Street, Philadelphia, Pennsylvania 19106.

Argonne National Laboratory. Limited number of postdoctoral appointments and temporary appointments for faculty members in many fields of applied mathematics and the computer sciences. Write to Ronald A. Johns, Professional Placement, Argonne National Laboratory, Department A, 9700 South Cass Avenue, Argonne, Illinois 60439.


**Discontinued for 1972-1973,**
**Australian Institute of Nuclear Science and Engineering.** Research fellowships. Fellowships are intended for scientists and engineers who have qualifications equivalent to the Ph. D. and are at a relatively early stage of an independent research career. Stipends are in the range of $6,200 to $8,180 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 Officer, 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.

**Courant Institute.** Instructorships in Mathematics. Open to young mathematicians with doctor's degrees who show strong promise in research. The teaching duty will consist of one course each term, of which one term will be related to the field of interest of the instructor. Appointments are for two years. The academic salary for nine months will be $10,500. In addition, the Courant Institute may be able to offer support for research in residence during two summer months. Inquiries or requests for application forms should be addressed to the Committee on Instructorships, Courant Institute of Mathematical Sciences, New York University, 251 Mercer Street, New York, New York 10012. Applications should be filed no later than January 11, 1972.

**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 1972-73 must be submitted before January 1, 1972. Inquiries should be addressed to the Visiting Membership Committee, Courant Institute of Mathematical Sciences, New York University, 251 Mercer Street, New York, New York 10012.

**Department of State, Agency for International Development.** Research grants for research projects and analytical studies in systems and operations dealing with socio-economic development problems. Research groups are encouraged to investigate problems of their own devising within the above areas. Further information can be obtained from Mr. John Welty, Economic Research Support Staff, Bureau for Program and Policy Coordination, Agency for International Development, Department of State, Washington, D. C. 20523.

**G. C. Evans Instructorships at Rice University.** For promising young mathematicians with the doctorate, primarily for new Ph. D.'s. Appointments are for two years at a salary of at least $11,000 for the regular academic year. Inquiries and applications should be addressed to Professor Salomon Bochner, Chairman, Department of Mathematics, Rice University, Houston, Texas 77001.

**J. Willard Gibbs Instructorships.** Offered by Yale University to young men and women with the doctorate who show definite promise in research in pure mathematics. Appointments are for two years at a salary of $10,300 for the academic year. Each recipient will be given an allowance of up to $200 toward the actual expense of moving his household possessions to the New Haven area. The teaching load is kept as light as possible, so as 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 Chairman, Department of Mathematics, Yale University, Box 2155 Yale Station, New Haven, Connecticut 06520. Preference will be given to applications received before February 1, 1972. Yale University is an equal opportunity employer.

**John Simon Guggenheim Memorial Foundation Fellowships.** Applicant should be between 30 and 45 years of age (exceptions are made) and engaged in scientific research. No academic degree is required, but the fellowships are on the advanced postdoctoral level. U.S. 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 of the Philippines. Nominations are made by the Committee of Selection. Approximately 350 awards are made, averaging $10,000 in 1971. For more information write to President, John Simon Guggenheim Memorial Foundation, 90 Park Avenue, New York, New York 10016.

**The Hebrew University of Jerusalem.** Postdoctoral Fellowships. Fellowships in the fields of mathematics and computer science. Provides for tax-free salary of 10,000 Israeli pounds, and usually allows for round-trip passage. No financial assistance to accompanying dependents. The applicant is required to submit his application (in letter form) together with a detailed curriculum vitae and a list of publications, and two letters of recommendation from persons well-acquainted with the applicant's academic and research records. Fellowships are intended for persons who received their Ph. D.'s during the years of 1969-1971, and for those who will complete all requirements for the Ph. D. before the autumn of 1972. Application letters and letters of recommendation should be sent to the Dean, Faculty of Science, The Hebrew University of Jerusalem, Jerusalem, Israel. Deadline is December 1, 1971.

**E. R. Hedrick Assistant Professorships.** The Department of Mathematics of the University of California, Los Angeles, has established two assistant professorships for the year 1972-1973. These awards will be made to young mathematicians with doctor's degrees who show strong promise in research. Appointment will be for two years at an annual salary of $12,500, plus a summer research supplement of $2,500. The teaching load is 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, Los Angeles, 405 Hilgard Avenue, Los Angeles, California 90024. Deadline for applications is January 15, 1972.
T. H. Hildebrandt Research Instructorships. These instructorships in mathematics at The University of Michigan are designed to provide promising young mathematicians with favorable circumstances for the development of their research talents. Preference will be given to those having their Ph. D. for less than two years. Several of these research instructorships are available each academic year. The teaching load averages one and one-half courses per semester and part of the teaching load consists of an advanced course. The stipend will be at least $11,000 for the academic year 1972-1973, with the strong possibility of additional income during the summer. Research Instructors will be appointed for two years, and may then be considered for regular faculty appointments. Applicants must have completed all requirements for the Ph. D. degree when the term of appointment begins. Each applicant must submit a curriculum vitae which includes his educational background and a brief outline of the research problems of interest to him, plus three letters of recommendation which should contain comments on the applicant's mathematical promise, teaching ability, and personality. First preference will be given to applications completed by January 15, 1972. Appointments will be announced early in February.

Applications should be made to the Chairman, Department of Mathematics, The University of Michigan, Ann Arbor, Michigan 48104.

Václav Hlavatý Research Assistant Professorships. Offered by the Department of Mathematics at Indiana University to young mathematicians with doctorates who show definite promise in research. The appointment is for three years with an academic-year salary of at least $11,300. 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 annual 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 Professor William P. Ziemer, Acting Chairman, Department of Mathematics, Swain Hall East, Indiana University, Bloomington, Indiana 47401. Preference will be given to applications received before January 31, 1972.

IBM Thomas J. Watson Research Center. Postdoctoral fellowships. These fellowships provide young scientists of outstanding ability and opportunity to pursue and broaden their scholarship while in residence at the Research Center. A candidate is normally expected to have received his doctorate prior to, but no earlier than five years before, the start of his fellowship. The duration of the fellowship is eleven months. The stipend will generally be in the range of $15,000-$20,000, depending on qualifications. In addition, there will be an allowance for moving expenses. Additional information can be obtained from the Director, Mathematical Sciences Department, IBM Thomas J. Watson Research Center, P. O. Box 218, Yorktown Heights, New York 10598. Completed applications should be received by January 15, 1972, or as soon thereafter as possible.

Institute for Advanced Study. 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 1972-1973. 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 secretary 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 January 15, 1972, or as soon thereafter as possible.

Los Alamos Scientific Laboratory. Offered to U.S. citizens holding the Ph. D., with research opportunities in computer science, numerical science, and applied mathematics. A limited number of postdoctoral appointments are available for one year, subject to renewal for a second year. Write to Recruiting Department, Los Alamos Scientific Laboratory, University of California, P. O. Box 1663, Los Alamos, New Mexico 87544.

Mathematics Research Center. For support of mathematical research of interest to the U.S. Army. Visiting research member appointments at all levels from postdoctoral up. For information write to J. Barkley Rosser, Director, Mathematics Research Center, United States Army, University of Wisconsin, Madison, Wisconsin 53706.

C. L. E. Moore Instructorships in Mathematics. Offered by the Department of Mathematics at the Massachusetts Institute of Technology. Open to young mathematicians with doctorates who show definite promise in research. The base salary will be at least $11,000, and the teaching load is six hours per week in one semester and three hours per week in the other. The appointments are annual but renewable for one additional year. Applications should be filed not later than July 1 on forms obtained from the Department, 2-247, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139.

National Aeronautics and Space Administration. Postdoctoral and Senior Postdoctoral Resident Research Associateships. Open to individuals at the postdoctoral level who have the Ph. D., M. D., or Sc. D. degree or its training equivalent, or who have completed the requirements for one of these degrees. Open to U.S. citizens and, in some cases, to foreign nationals. Tenable at Ames Research Center, Moffett Field, California; Goddard Space Flight Center, Greenbelt, Maryland; Goddard Institute for Space Studies, New York City; Jet Propulsion Laboratory, Pasadena, California; Langley Research Center, Hampton, Virginia; Lewis Research Center, Cleveland, Ohio; Manned Spacecraft Center, Houston, Texas; and Marshall Space Flight Center, Huntsville, Alabama. Forms are available from the Associateship Office, J. H. 606, National Research Council, 2101 Constitution Avenue, N. W., Washington, D. C. 20418. Annual stipend begins at $13,000. Senior stipend variable. Deadlines for receipt of completed applications in 1972 are January 15, May 15, September 15, with announcement of awards in March, July, and November.
National Aeronautics and Space Administration. Research Grants. Through grants and contracts to educational and nonprofit institutions and industries, NASA sponsors research in fundamental and applied mathematics related to space science and engineering problems. Unsolicited proposals should be submitted to the Office of University Affairs, National Aeronautics and Space Administration, Washington, D. C. 20546.

National Bureau of Standards. Postdoctoral Research Associateships. Awards are made in several fields, including mathematics. Tenable in the Gaithersburg, Maryland area and Boulder, Colorado. Applicants should state, in some detail, their field of specialization and should indicate area of interest. Annual stipend for these appointments is not less than $13,000. More details regarding this program may be obtained from the Associateship Office, JH 604, National Research Council, 2101 Constitution Avenue, N.W., Washington, D. C. 20418. Deadline for submission of applications is January 15, 1972. No materials will be distributed after January 5, 1972.

National Research Council. Research Associateships Programs. These programs afford qualified scientists and engineers opportunities for postdoctoral research on problems of their own choice in a variety of scientific disciplines and fields of specialization. The programs are conducted on behalf of and in cooperation with certain Federal organizations with laboratories at more than eighty geographic locations in the United States. Applications for these competitive awards will be received by the National Research Council until January 15, 1972. Appointments will be made in March for tenure to begin on or before July 1, 1972. Stipends, which are subject to income tax, will vary according to the type of appointment, but will not be less than $13,000. Further information and application materials can be obtained from the Associateship Office, JH 606, National Research Council, 2101 Constitution Avenue, N.W., Washington, D. C. 20418.

National Science Foundation. Research Grants. Proposals accepted at any time, but those requesting support during a given summer should be received by the Foundation by November 1 of the preceding year. Instructions for the preparation of proposals, contained in a booklet entitled "Grants for Scientific Research," may be obtained upon request from the Mathematical Sciences Section, National Science Foundation, Washington, D. C. 20550.

Naval Ordinance Laboratory. Postdoctoral Research Associateships. Awards are made in several fields, including mathematics. Tenable in Silver Spring, Maryland. Applicants should state, in some detail, their field of specialization. Annual stipend for these appointments is not less than $13,000. More details regarding this program may be obtained from the Associateship Office, JH 604, National Research Council, 2101 Constitution Avenue, N.W., Washington, D. C. 20418. Deadline for submission of applications is January 15, 1972. No application material will be distributed after January 5, 1972.

Naval Undersea Research and Development Center. Postdoctoral Research Associateships. Awards are made in several fields including mathematics. Tenable in San Diego and Pasadena, California. Applicants should state in some detail their field of specialization. Annual stipend for these appointments is not less than $13,000. More details regarding this program may be obtained from the Associateship Office, JH 604, National Research Council, 2101 Constitution Avenue, N.W., Washington, D. C. 20418. Deadline for submission of applications is January 15, 1972. No application materials will be distributed after January 5, 1972.

Benjamin Pierce Lectureships. Rank of Assistant Professor. The appointments are for three years with a starting salary of $10,000 (for the nine-month academic year) and annual increments of $500. This salary can be augmented during the summer by teaching at summer school or by work on a research contract if funds are available. The teaching commitment is six hours a week, including a graduate course on a subject of the lecturer's choice, if desired. Application forms may be obtained by writing to the Department of Mathematics, Harvard University, 2 Divinity Avenue, Cambridge, Massachusetts 02138, and should be filed by January 20, 1972.

Sloan Foundation. Unrestricted grants made to selected young university scientists in the physical sciences (including mathematics) and in neuroscience. Candidates in the physical sciences 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 chairman or other scientists. For information write to the Alfred P. Sloan Foundation, 630 Fifth Avenue, New York, New York 10020.

State University of New York at Buffalo. The Department of Mathematics will award George William Hill and Emmy Noether Research Instructorships to young mathematicians, thereby enabling them to carry forward a research program. Two awards are granted yearly with appointments for two years. The 12-month stipend, beginning September 1972, is $15,000 including generous staff benefits. Teaching loads will total two one-semester courses during the 12-month period. Upon expiration of the two-year appointment, priority consideration for a three-year appointment as assistant professor will be given and will be based upon success and potential in both research and teaching. Instructors must have completed all requirements for the Ph. D. by September 1, 1972. 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 three mathematicians to send letters of recommendation. The applications and supporting letters should be sent to Professor N. D. Kazarinoff, Chairman, Department of Mathematics, SUNY at Buffalo, 4246 Ridge Lea Road, Amherst, New York 14226, so as to arrive by January 22, 1972. Appointments will be announced by February 15.
John Wesley Young Research Instructorships. Offered by Dartmouth College. Appointments are for two years, with a salary of $10,000 for the academic year. Additional summer support can be arranged. Teaching load is usually light and consists of courses of more than routine interest. An applicant should have completed his doctorate by the time his appointment is to begin. In addition to a letter expressing his interest in a Tamarkin Instructorship, the applicant should have three letters of recommendation submitted for him to the Department of Mathematics by January 15, 1972. Applicants should write to the Chairman, Department of Mathematics, Brown University, Providence, Rhode Island 02912.

U.S. Army Natick Laboratories. Postdoctoral and Senior Postdoctoral Visiting Scientists Research Associateships. Awards made in several fields, including mathematics. Tenable in Natick, Massachusetts. Applicants should state, in some detail, their field of specialization and should indicate area of interest. Annual stipends for these appointments begin at $12,500. Senior stipend variable. More details regarding this program may be obtained from the Associateship Office, JH 606, Office of Scientific Personnel, National Research Council, 2101 Constitution Avenue, N.W., Washington, D.C. 20418. Deadline for receipt of completed applications in 1972 is January 15, with announcement of awards in March.

U.S. Department of Health, Education, and Welfare, National Institutes of Health. Supports postdoctoral and special fellows. Research in biostatistics, especially as related to health and disease. Applicant must have earned an appropriate degree and show that his goal is a research career in the health related sciences. U.S. citizenship or lawful admittance to the U.S. for permanent residence is required. Announcements available from Fellowships Section, Career Development Review Branch, Division of Research Grants, National Institutes of Health, Bethesda, Maryland 20014.

John Wesley Young Research Instructorships. Two instructorships are 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 may be supplemented by a summer research fellowship. The appointments are for two years and are not renewable. Applicants should write to J. Laurie Snell, Chairman, Department of Mathematics, Dartmouth College, Hanover, New Hampshire 03755.

Travel and Study Abroad

Alliance Française de New York. For study in France, a limited number of scholarships for all fields of study at the graduate level. Each scholarship is in the amount of $1,000. Applicants must be between the ages of 20 and 30 and have a working knowledge of French. Students currently enrolled in an American university should see the Fulbright Program Advisor on campus; students not currently enrolled in an American university should communicate with the Information and Reference Division, Institute of International Education, 809 United Nations Plaza, New York, New York 10017, or IIE regional offices in Atlanta, Chicago, Denver, Houston, Los Angeles, San Francisco, and Washington, D.C. Deadline for submission of applications is December 15.

American-Scandinavian Foundation. Graduate fellowships to be used in Scandinavia. Applicants must be U.S. citizens who have completed their college education and must be under 40 years old. Completed application deadline is December 1 (November 1 for Marshall Fellowships for Denmark). Write to The American-Scandinavian Foundation, 127 East 73rd Street, New York, New York 10021.

Foreign Area Fellowship Program. This program offers a limited number of research training and internship opportunities in Latin America, Asia, Africa, Western Europe, and the Near East, the majority of which are in the social sciences and humanities. A few grants are available for those in the natural and physical sciences. Applicants must be, in most cases, predoctoral students enrolled in American or Canadian universities. Further information may be obtained by writing to Foreign Area Fellowship Program, 110 East 59th Street, New York, New York 10022.

Fulbright-Hays Program. Grants for 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 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 Advisor on his campus. Unenrolled students may apply to the Institute of International Education. Further details may be obtained from the Information and Reference Services Division, Institute of International Education, 809 United Nations Plaza, New York, New York 10017.

Fulbright-Hays 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. Grants are generally tenable for one academic year in one designated...
country and include round-trip transportation for the grantee, maintenance allowance to cover living expenses of grantee and family, and a small incidental allowance to cover supplies and services essential to the project. Subject to the availability of funds, a supplemental dollar grant for lecturers in most non-European countries may be given. Write to Committee on International Exchange of Persons, Senior Fulbright-Hays Program, 2101 Constitution Avenue, N.W., Washington, D.C. 20418.

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. Each board is open to students in all fields, including mathematics. Tenure is normally either 9 or 12 months. Write to the Fellowship Office, National Research Council, 2101 Constitution Avenue, N.W., Washington, D.C. 20418. Applications are due in October.

North Atlantic Treaty Organization. Postdoctoral Fellowships. For study abroad in countries in the NATO Alliance. Open to U.S. citizens who have earned a doctoral degree or who have had research training and experience equivalent to that represented by the doctoral degree in one of numerous scientific fields, including mathematics. Tenure is normally either 9 or 12 months. Write to the Fellowship Office, National Research Council, 2101 Constitution Avenue, N.W., Washington, D.C. 20418. Applications are due in October.

North Atlantic Treaty Organization. Senior Fellowships in Sciences. For U.S. citizens or nationals to study new scientific techniques and developments at nonprofit research and educational institutions in other NATO nations, or countries cooperating with NATO, for tenures of one to three months. Application materials, including a statement of research project, may be obtained from the NATO Science Division (Operational Research), NATO, 1110 Brussels, Belgium.

Rotary Foundation. Graduate Fellowships and Undergraduate Scholarships. One academic year of study abroad for the 1973-1974 year is available to outstanding young men and women who are interested in world affairs and who can fulfill a dual role of scholar and "ambassador of good will." Graduate fellowships and undergraduate scholarships cover full transportation, education, living, and miscellaneous expenses for one academic year, plus, in certain cases, a period of intensive language training in the study country prior to the commencement of the regular academic year. Awards are made...
for study in any field and are tenable in more than 149 countries in which there are Rotary Clubs. An applicant for a graduate fellowship must be between the ages of 20 and 28 inclusive as of March 15, 1972, married or single, and have obtained a bachelor's degree or equivalent prior to the beginning of his fellowship year. An applicant for an undergraduate scholarship must be between the ages of 18 and 24 inclusive as of March 15, 1972, must be single, and have completed two years of university level work but not have obtained a bachelor's degree prior to the beginning of his scholarship year. Application must be made through the Rotary Club nearest to the applicant's permanent residence not later than March 15, 1972.

Royal Norwegian Council for Scientific and Industrial Research. Postdoctorate Fellowships. Fields: engineering and applied sciences. Candidates should not be more than 35 years of age. Studies can be carried out at the Universities of Oslo and Bergen, the Technical University of Norway, and at different 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 February 1. Write to Royal Norwegian Council for Scientific and Industrial Research, Gaustadelen 30, Oslo, Norway.

Alexander von Humboldt Foundation Fellowships. These fellowships of 6 to 12 months are offered in order to pursue advanced academic research projects at a German university or research institute. Fields of research and citizenship are unrestricted. Amount of stipend: 'Forschungstipendium' DM 1200. -monthly, 'Dozentenstipendium' DM 1600. -monthly; supplementary family allowances, travel expenses. An extension of the original award period is possible. Applicants should furnish proof of independent teaching experience at university level or research work (of at least two years if interested in a 'Forschungstipendium' and at least five years if interested in a 'Dozentenstipendium'). They should hold a Ph. D., have sufficient knowledge of German and, as a rule, not be older than 38. Applicants for a 'Dozentenstipendium' should have outstanding academic publications to their credit. For further information write to Alexander von Humboldt-Stiftung, 53 Bonn-Bad Godesberg, Schillerstrasse 12, Germany.

William and Mildred Zelosky Scholarships. Open to American and Polish men at least 21 years of age. American candidates must have at least a master's degree and a knowledge of the Polish language. Polish candidates must have at least their master's degree and preferably their doctorate, plus sufficient knowledge of the English language. Polish citizenship is required for study in the United States; U.S. citizenship is required for study in Poland. Write to Kosciuszko Foundation, 15 East 65th Street, New York, New York 10021.

Study in the U. S. for 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 $1,100. Applicants must be between the ages of 20 and 30 and have a working knowledge of English. For further information, write to Chairman of Scholarships Committee, Alliance Française de New York, 22 East 60th Street, New York, New York 10022 or Alliance Française, 101 Boulevard Raspail, Paris 6e, France.

American Association of University Women. International Fellowships. Approximately 50 awards made to women of other countries for advanced study or research in the United States for one academic year. No restriction as to age or field of study, except that awards are not made in the creative or performing arts. An applicant must hold the equivalent of a bachelor's degree, be proficient in English, and intend to return to her own country. Forms may be obtained from the University Women's Association or Federation in the applicant's country or the Cultural Affairs Officer of the U. S. Embassy. (U.S. address: Fellowships Office, AAUW Educational Foundation, 2401 Virginia Avenue, N.W., Washington, D.C. 20037.) Application deadline is December 1 for subsequent academic year.

Fulbright-Hays Program. Grants under the Fulbright-Hays 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. (U.S. address: Information and Reference Services Division, Institute of International Education, 809 United Nations Plaza, New York, New York 10017.) The number of grants for the academic year 1972-1973 will depend on funds available.

National Aeronautics and Space Administration. International University Fellowships in Space Science. Foreign nationals only. Level: graduate and postdoctoral. Candidates must be sponsored by their national or regional space research organization or national research councils, must have the equivalent of an earned Master of Science or Master of Engineering degree, and must intend to return to their own countries. Fields: all space sciences. Fellowships in the mathematical sciences tenable at 39 U. S. universities. Applications should be made to the national space research organization, national research council, or appropriate organization of the applicant's own country. Further information may be obtained from the Office of Scientific Personnel, National Research Council, 2101 Constitution Avenue, N.W., Washington, D.C. 20418.
Sources of Fellowship Information

Exchange Programs with Eastern Europe and the Soviet Union for 1972-1973. International Research and Exchanges Board (IREX), 110 East Fifty-Ninth Street, New York, New York 10022. Gives details on the programs administered by IREX which include exchanges for a semester or an academic year, short term travel grants, and awards for support of collaborative projects.


Selected List of Major Fellowship Opportunities and Aids to Advanced Education for United States Citizens. Fellowship Office, National Research Council, 2101 Constitution Avenue, N.W., Washington, D.C. 20418, 1970. Contains a list of fellowships available on the undergraduate, graduate, and postdoctoral levels plus a bibliography giving other sources of information on fellowships, scholarships, and loans.

TAX STATUS OF GRANTS

Under Section 117 of the Internal Revenue Service Code, assistantships, fellowships, and grants meeting certain conditions are excludable from gross income and therefore not subject to the Federal Income Tax. The Internal Revenue Service has given the following interpretation of Section 117.

"Section 117(a) of the Internal Revenue Code of 1954 permits an individual to exclude from his gross income amounts received as a scholarship or fellowship grant. Whether the amounts received are in fact a scholarship or fellowship grant, i.e., are paid for the primary purpose of furthering the recipient's education and training, is a conclusion reached by the Internal Revenue Service on the basis of the facts in a particular case.

"Section 117(b) (1) of the Code provides that in the case of individuals who are candidates for a degree the exclusion from gross income shall not apply to that portion of any amount received as payment for teaching, research, or other services in the nature of part-time employment required as a condition to receiving the scholarship or fellowship grant. However, if teaching, research, or other equivalent services are required of all candidates for a particular degree as a condition to receiving the degree, such teaching, research or other services shall not be regarded as part-time employment.

"In situations where research is required of all degree candidates, but only those students who engage in teaching receive stipends, the Service would conclude that the stipend was not excludable under Section 117(a) of the Code, but was paid for services rendered in the nature of part-time employment.

"If research and teaching services are required of all degree candidates and such research and services are performed for the primary purpose of furthering the students' education and training, the Service would conclude that stipends paid for the research and teaching services, required of all degree candidates, are excludable from the recipients' gross income under Section 117(a) of the Code. However, amounts paid to a degree candidate for teaching services not strictly required as a condition to receiving the degree for which the recipient is a candidate, at the time he performs the service, represents compensation for services rendered which is includable in the recipient's gross income."

To help expedite the processing of returns, two forms are given below showing the types of information which should be provided by the graduate school for the Internal Revenue Service to help determine the validity of the claimed tax exclusion.

Application for total exclusion of stipend from gross income

TO WHOM IT MAY CONCERN:

During the calendar year 19_______, ___ served as a Research Assistant in the Department of __________________ at the ____________ University from __________ to _____________. He was paid a stipend of $_______ for his services. The funds were derived from _____________________________.

At the same time, he was a candidate for the degree of _________________. The research which he performed under this arrangement met, in part, the requirements for this degree.

Equivalent research is required of all students working for this same degree at the __________________________ University, regardless of whether or not they are compensated for their services.
Application for partial exclusion from Federal Income Tax

TO WHOM IT MAY CONCERN:

During the calendar year 19__ serving as a (name of student) (position) in the Department of ______________ at the ______________ University from ___________ to ___________. He was paid a stipend of $_____.

The funds were derived from __________________________. At the same time he was a candidate for the degree of ______________. During this period the candidate spent approximately (a) _________ percent of his working time (assigned duties), which is not required for the degree, and (b) _________ percent of his time on degree requirements. The research or study which he performed under (b) met in part the requirements for his degree. Equivalent research is required of all students working for this same degree at the ______________ University, regardless of whether or not they are compensated for their services.

Instead of paying one stipend to those students who are actually being paid for services on a part-time basis, and then requesting a partial exclusion for the time spent on degree requirements, it is suggested that the university make two awards to such students. One award would be computed on a straight salary basis for the time the student worked, and the student would then report his salary to the Internal Revenue Service in the usual way. A second award would be considered a fellowship, and on this a total exclusion could be requested.

The Department of the Treasury publishes a four-page pamphlet entitled "Tax Information on Scholarships and Fellowships," Publication 507 (10-69). This pamphlet is available at most Internal Revenue offices, and bulk orders may be obtained from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402, for $7.50 per one hundred copies.
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AMERICAN MATHEMATICAL SOCIETY
P. O. Box 6248, Providence, R. I. 02904
INDEX OF ABSTRACTS
Volume 18 (1971)

ABBE, Kinetsu. On Kählerian submanifolds in 4\textsuperscript{N}. Preliminary report, 820.
ABE, Kinetsu. On Kählerian submanifolds in 4\textsuperscript{N}. Preliminary report, 820.
ABHYANKAR, Shreeram S. Epimorphisms of polynomial rings, 359.
ABHYANKAR, Shreeram S., and HEINZER, William J. Uniqueness of the coefficient ring in a polynomial ring, 359.
ABIAN, Alexander. The common points of families of normal functions, 663; Mitotic ordinals and their ring, 359.
ACCOLA, Robert D. M. Vanishing properties of theta functions for abelian covers of Riemann surfaces. II. Preliminary report, 513; Vanishing properties of theta functions for abelian covers of Riemann surfaces. II. Preliminary report, 513.
AGARWAL, Arun Kumar. On the maximum modulus properties, 629.
ALAS, Ofelia T. Topological groups and uniform continuity, 431; Semifields and positive linear functionals, 678.
ALBERGHINI, Sergio. On bound states in the continuum of N-body systems and the virial theorem, 241.
ALEXANDER, Charles C. A metrization theorem, 786.
ALEXANDER, Herbert J. On polynomial hulls, 1081.
ALEXANDER, Ralph, and STOLARSKY, Kenneth B. On the sum of distances between points on a sphere. Preliminary report, 562.
ALLEN, Dennis F., and KINGMAN, James P. A generalization of the Rees theorem to a class of regular semigroups, 130.
ALO, Richard A., SHAPIRO, Harvey L., and WEIR, Maurice D. Realcompactness and Wallman realcompactifications, 546.
ALTER, Ronald, and VILLARINO, Mark B. A remark on primes in arithmetic progressions, 85.
ALTON, Donald Alvin, and MADISON, Eugene W. Computability of Boolean algebras and their extensions, 92.
AMANN, Herbert. Existence theorems for Hammerstein equations, 194.
AMBERG, Bernhard. Infinite groups which are the product of two abelian subgroups, 130.
ANDERSEN, H. L., and SURYANARAYANA, D. Quasi­
ABE, Kinetsu. On Kählerian submanifolds in 4\textsuperscript{N}. Preliminary report, 820.
ABE, Kinetsu. On Kählerian submanifolds in 4\textsuperscript{N}. Preliminary report, 820.
ABHYANKAR, Shreeram S. Epimorphisms of polynomial rings, 359.
ABHYANKAR, Shreeram S., and HEINZER, William J. Uniqueness of the coefficient ring in a polynomial ring, 359.
ABIAN, Alexander. The common points of families of normal functions, 663; Mitotic ordinals and their ring, 359.
ACCOLA, Robert D. M. Vanishing properties of theta functions for abelian covers of Riemann surfaces. II. Preliminary report, 513; Vanishing properties of theta functions for abelian covers of Riemann surfaces. II. Preliminary report, 513.
AGARWAL, Arun Kumar. On the maximum modulus properties, 629.
ALAS, Ofelia T. Topological groups and uniform continuity, 431; Semifields and positive linear functionals, 678.
ALBERGHINI, Sergio. On bound states in the continuum of N-body systems and the virial theorem, 241.
ALEXANDER, Charles C. A metrization theorem, 786.
ALEXANDER, Herbert J. On polynomial hulls, 1081.
ALEXANDER, Ralph, and STOLARSKY, Kenneth B. On the sum of distances between points on a sphere. Preliminary report, 562.
ALLEN, Dennis F., and KINGMAN, James P. A generalization of the Rees theorem to a class of regular semigroups, 130.
ALO, Richard A., SHAPIRO, Harvey L., and WEIR, Maurice D. Realcompactness and Wallman realcompactifications, 546.
ALTER, Ronald, and VILLARINO, Mark B. A remark on primes in arithmetic progressions, 85.
ALTON, Donald Alvin, and MADISON, Eugene W. Computability of Boolean algebras and their extensions, 92.
AMANN, Herbert. Existence theorems for Hammerstein equations, 194.
AMBERG, Bernhard. Infinite groups which are the product of two abelian subgroups, 130.
ANDERSEN, H. L., and SURYANARAYANA, D. Quasi­
ABE, Kinetsu. On Kählerian submanifolds in 4\textsuperscript{N}. Preliminary report, 820.
ABE, Kinetsu. On Kählerian submanifolds in 4\textsuperscript{N}. Preliminary report, 820.
tion of outer multiplicities on a computer, 124.
BEDNAR, Jonnie Bee. A facial characterization of
Choquet sets, 254.
BEDNAREK, Alexander R., and NORRIS, Eugene M.
More on externally induced operations. Preliminary
report, 1042.
BEER, Gerald A. Continuity properties of the
visibility function. Preliminary report, 659; The
index of convexity and pseudo-starshaped sets.
Preliminary report, 364.
BEHAN, Donald F. Commuting analytic functions
without fixed points, 149.
BENEKE, Lowell W. On coderived graphs, 93.
BELDING, W. Russell. Incidence rings and topologies
of pre-ordered sets. Preliminary report, 305; In-
vertibility in incidence rings of finite pre-orders.
Preliminary report, 819.
BEHAN, Donald F. Commuting analytic functions
without fixed points, 149.
BEISCHER, Gerhard. Embedding of near-rings into
near-rings with identity, 119.
BEIERMAN, David R. On the extent of a random
walk, 226.
BHANDELI, Mahesh C. On the classification of simple
BHR, Kappo, S. F. Minimally
(p - 6)-hamiltonian graphs, 244.
BHATIA, Hasso C. A generalized Frattini subgroup
of a finite group, 355.
BHOI, KP. Perturbing uniform ultimate
walks, 216.
BLOOD, Stephen L., and BROWN, Donald J. Classical
abstract logics. I, 827; Classical abstract logics. II,
986.
BLOZINSKI, Boris. On near-generalized triple systems
in the classification of simple
quasi-groups of order 2(3q
r) (r = 1, 2), 763.
BLOM, Stephen L., and BROWN, Donald J. Classical
abstract logics. I, 827; Classical abstract logics. II,
986.
BLOZINSKI, Boris. On near-generalized triple systems
in the classification of simple
quasi-groups of order 2(3q
r) (r = 1, 2), 763.
BLOM, Stephen L., and BROWN, Donald J. Classical
abstract logics. I, 827; Classical abstract logics. II,
986.
BLOZINSKI, Boris. On near-generalized triple systems
in the classification of simple
quasi-groups of order 2(3q
r) (r = 1, 2), 763.
BLOM, Stephen L., and BROWN, Donald J. Classical
abstract logics. I, 827; Classical abstract logics. II,
986.

BOWMAN, Robert H. Second order connections, 203.

BOWMAN, Thomas T. The automorphism groups of compact solenoidal and cylindrical semigroups, 1076.

BOYCE, William M. Optimal drawing from a random urn, 230; Triods, commuting functions, and FPP-less plane continua. Preliminary report, 386; On polynomials which commute with a given polynomial, 757; Baxter permutations and functional composition, 1071.


BRADLEY, Gordon H. Transformation of integer programs to single constraint integer programs, 421.

BRAGG, Lincoln E. Selfadjointness with indefinite quadratic forms, 759.

BRAMBLE, James H. Some new projection methods for the approximation of solutions of elliptic and parabolic problems, 381.

BRANDSTEIN, A. G. On the closure in $L^2$ of $R(N)$, 951.

BRAUDE, Eric J. Counterexamples to "extensions" of Lusin's separation principles. Preliminary report, 211; The projection of a compact zeroset is a subset of $E^0$, 211; The projection of a compact zeroset is a $\sigma$-compact group. Preliminary report, 412; Finite solvable groups with Sylow normalizers maximal. Preliminary report, 931.

BROOKS, Robert C. Double centralizers on covariance groups with Sylow normalizers maximal. Preliminary report, 625; Finite groups factorized by a single class of Sylow normalizers. Preliminary report, 755; Finite solvable groups with Sylow normalizers maximal. Preliminary report, 925.


BROOKS, M. S. See SAXON, Stephen A.

BROOKS, Robin. A lower bound for the number of solutions of $f(x) = a$, 385; Removing coincidences of two maps, 670; On the sharpness of the $\Delta_1$ and $\Delta_2$ Nielsen numbers, 975.


BROWN, David E. See LARSEN, Max D.

BROWN, Donald J. See BLOOM, Stephen L.


BROWN, James R. A universal model for ergodic automorphisms on groups, 546.


BROWN, Ronald P., and WARNER, Hoyt D. Quadratic extensions of linearly compact fields, 104.


BRYANT, Jack D., and GUSEMAN, Lawrence F., Jr. Fixed and periodic points of iterate contractive mappings, 260.

BRYANT, John L., and LACHER, R. Christopher. Embeddings with mapping cylinder neighborhoods, 435.

BUCHI, J. Richard. The monadic second order theory of $\omega_1$. Preliminary report, 862.

BUCHHOLZ, David C. Finite groups factorized by their Sylow normalizers. Preliminary report, 625; Finite groups factorized by a single class of Sylow normalizers. Preliminary report, 795; Finite solvable groups with Sylow normalizers maximal. Preliminary report, 531.

BUCHEMANN, Irwin. See SCHOCHETMAN, Irwin.

BUCKHOLTZ, James D. Bernoulli and Lidiad polynomial expansions, 253.

BUCHEMANN, Irwin. See SCHOCHETMAN, Irwin.


BUNTINAS, Martin G. On sectionally bounded sequence spaces and $\gamma$-duality, 188.

BURBEA, Jacob. Distortions in the Bergman geometry of bounded domains, 541.


BROWN, Ronald P., and WARNER, Hoyt D. Quadratic extensions of linearly compact fields, 104.


BRYANT, Jack D., and GUSEMAN, Lawrence F., Jr. Fixed and periodic points of iterate contractive mappings, 260.

BRYANT, John L., and LACHER, R. Christopher. Embeddings with mapping cylinder neighborhoods, 435.

BUCHI, J. Richard. The monadic second order theory of $\omega_1$. Preliminary report, 862.

BUCHHOLZ, David C. Finite groups factorized by their Sylow normalizers. Preliminary report, 625; Finite groups factorized by a single class of Sylow normalizers. Preliminary report, 795; Finite solvable groups with Sylow normalizers maximal. Preliminary report, 531.

BUCHEMANN, Irwin. See SCHOCHETMAN, Irwin.


BUNTINAS, Martin G. On sectionally bounded sequence spaces and $\gamma$-duality, 188.

BURBEA, Jacob. Distortions in the Bergman geometry of bounded domains, 541.


BURRIS, Stanley N. Classification theorems, 541; Classes of unary algebras, 622.


BUTLER, Kim Ki-Hang. On Kim's conjecture, 127; An identity in combinatorics, 549; Straddles and splits on semigroups, 628; A note on semigroups 0, 765; A
note on semigroups. I, 793; A note on semigroups. II, 931; The number of partially ordered sets. Preliminary report, 1092.

BYLLE, Kim Ki-Hang, and BASS, Charles D. Combinatorial properties of partial transformation semigroups, 1040.


BYRNE, C. L., COHEN, Henry B., and SULLIVAN, Francis E. A note on contractive projections on $\ell^p$ spaces, 650.

BYRNE, C. L., and SULLIVAN, Francis E. Representation of isometric involutions in an $\ell^p$ space, 948.


CAIN, George L., Jr. Metrizable mapping compactifications, 1067.

CAIN, Richard N. The exact couple of a mapping for twisted generalized cohomology, 263; A spectral sequence that relates homology of a polyhedron to the homology presheaf. Preliminary report, 936; A spectral sequence structure for homotopy theory of several subsheaves, 573.

CAIRN, Stewart S. Isotopies of complexes, 536.

CALDER, James R. Concerning almost symmetric point sets in normed linear spaces, 817.


CALLAHAN, Francis P. Types of noncommutative deformations of a two-generator purely inseparable field, 511.


CALVERT, Bruce Donald, and GUSTAFSON, Karl E. Nonlinear product operators, 652.

CAMBURN, Marvin E. Local Jordan algebras, 925.

CAMILLO, V. P., and FULLER, Kent R. Balanced and $\ell^p$-algebras. Preliminary report, 395.

CAMPBELL, Douglas M. Locally univalent functions with locally univalent derivatives, 150.

CANNON, James W. 1-ULC properties of embedded curves and surfaces in $E^n$, 860.


CARLISLE, Ronald L. Monotone maps and $\epsilon$-maps between graphs. Preliminary report, 1069.


CARLSON, David L. Good sequences of integers, Preliminary report, 1098.

CARLSON, John W. See HICKS, Troy L.

CARLSON, Ralph E., and HALL, Charles A. Error bounds for bicubic spline interpolation, 235.

CARMICHAEL, Richard D. Generalized Cauchy and Poisson integrals and distributional boundary values, 1053.


CARPENTER, Rom L. Systems of derivations and algebras of functions, 186.

CARROLL, Francis W. See BONAR, Daniel D.

CARROLL, Robert W., and SILVER, Howard A. Growth properties of solutions of some "canonical" hyperbolic equations with subharmonic initial data.

Preliminary report, 957.


CASHWELL, Edmund D. See Everett, C. J.


CATLIN, Donald E. Cyclic atoms in orthomodular lattices, 95.


CEDER, Jack G. See BRUCKNER, Andrew M.

CELIK, Hasan A. On primitive and prime antiflexible rings, 125.

CHAI, Winching A. On derivatives of biorbogonal polynomials, 156.


CHALMERS, Bruce L., and FERGUSON, Le Baron O. Sets of best approximation in certain classes of normed spaces, 169.

CHAMBLES, Donald A. The $\ell$-group of almost-finite, continuous functions, 1041.


CHAO, Chong-Yun. On the classification of symmetric graphs with a prime number of vertices, 508.

CHATFIELD, John A. Equivalence of integrals, 962.


CHAWLA, Lal M. An isomorphism theorem on universal algebras, 397.

CHAWLA, Lal M., and MAXFIELD, John E. On partitions of the type $X_1 + \ldots + X_k = n$, $k \geq 2$. Preliminary report, 1075.


CHEATHAM, Thomas J. Rings with zero singular left ideal and finite Goldie dimension. Preliminary report, 121.

CHEIN, Orin. Induced automorphisms of free meta-belian groups, 151; Moufang loops of small order. I. Preliminary report, 555.

CHERIN, Orin, and ROBINSON, Daniel A. An "extra" law for characterizing Moufang loops, 1042.


CHEN, Bang-yan, and LUDDEN, Gerald D. Riemann surfaces in complex projective space, 966.


CHEN, Kuang-Ho. Symmetrization of distributions and its application, 87.
GOWRISANKAN, Kohur N. Iterated fine limits and iterated nontangential limits, 927.
GRAFF, Samuel M. On conservation of hyperbolic invariant tori for Hamiltonian systems. Preliminary report, 646.
GRAMS, Anne P. See GILMER, Robert.
GRAMS, William A. Various representations of algebraic lattices as congruence lattices of universal algebras, 937.
HALPERN, Fred. Solution of the traveling salesman problem for convex-like sets, 922.
HAMILTON, Howard B. See TAMURA, Takayuki.
HANSEL, Roger. Isoperimetric inequalities for manifolds with boundary, 203.
HANSEN, Thomas H. McH. Actions of a locally compact group with compact boundary, 1043.
HARDY, Kenneth, and WOODS, Russell Grant. On


HARLEY, Peter W. III. On countably paracompact spaces and closed maps, 1069.


HARRINGTON, Leo A. Structures with recursive presentations. Preliminary report, 826.

HARRIS, Douglas. Wallman compactification as a functor, 208.


HARRIS, William, Jr., and SIBUYA, Yasutaka. Asymptotic distribution of eigenvalues for a boundary value problem, 369.

HARVEY, Robin. Spectral mapping theorems, 558.

HARTMANN, Frederick W. On Karamata's method of summation of a Cauchy product series, 1102.

HATCHER, William S. Identities in categories, 552.


HATTÁ, Leiko. The v-derivative on measure algebra from functions on abelian idempotent semigroups, 612.

HAUSEN, Jutta. Abelian p-groups and normal torsion subgroups of their automorphism groups, 131: Automorphisms of abelian torsion groups with finite p-ranks, 537.

HAY, Louise. A discrete chain of degrees of index sets, 665; Discrete \( \omega \)-sequences of index sets. Preliminary report, 1088.


HAYNSWORTH, Charles A., Jr., and FIEDLER, Miroslav. Cones which are topoheavy with respect to a norm. Preliminary report, 114.


---. See Bonnett, Dennis A.

HEATH, Robert W., and HODEL, Richard E. Characterizations of \( \sigma \)-spaces, 678.

HEATH, Robert W., and LUTZER, David J. A note on monotone normality, 785; A characterization of monotone normality. Preliminary report, 1066.

HECHLER, Stephen H. On classifying almost-disjoint families, 424.


HEDLUND, Gurev. A. See COVEN, Ethan.

HEDRICK, Mark Blondeau. Nearly reducible and nearly decomposable: special classes of irreducible and fully indecomposable matrices, 404.

HEDSTROM, Gerald W. A new algorithm for the nonlinear wave equation, 377.


HEIDEI, John W. A counterexample in nonlinear boundary value problems, 1055.

HEIDEI, John W., and HINTON, Don. The existence of oscillatory solutions for a nonlinear differential equation, 366.


HEINZER, William J. A characterization of certain 2-dimensional regular affine UFD's as polynomial rings. Preliminary report, 1046.

---. See ABHYANKAR, Shreeram S.

HEITSCH, James L. On the classifying space of Haefliger. II. Preliminary report, 257, 792.

HELLERSTEIN, Simon. The maximal Nevanlinna deficiency of a finite value in the class of entire functions of finite order \( \lambda \), 1080.

HELTON, Jon C. A nonlinear sequence to sequence transformation, 168; Sequence transformations by the identity matrix. Preliminary report, 560; Some interdependencies of sum and product integrals. Preliminary report, 563.


HEMPEL, John P., and JACO, William H. 3-manifolds with fundamental group a direct product, 262; Finitely presented normal subgroups of the fundamental group of a 3-manifold, 671.

HENDERSON, David W. Applications of infinite-dimensional manifolds to quotient spaces of metric ANR's, 219, 792.

HENDRICKS, Walter J. Hausdorff dimension in a process with stable components—an interesting counterexample. Preliminary report, 1109.

HENRY, Bruce R. Escape from the unit interval under the transformation \( x \mapsto \chi(x\cdot(1-x)) \). Preliminary report, 955.

HENSON, C. Ward. A family of countable homogeneous graphs, 92.


HERRERO, Domingo A. Transitive operator algebras containing a subalgebra of finite strict multiplicity, 958.

HERRING, John. See HATCHER, William S.

HERRMANN, Robert A. Some results using the nonstandard theory of remoteness. I, 431, 792; A collection of nonacceptable topologies for \( 2^X \). 839.

HESSE, Peter. On nonlinear equations of Hammerstein type in Banach spaces, 376; Existence theorems of Fredholm alternative type for nonlinear Hammerstein integral equations, 413.

HETCOTE, Herbert W. Analogues of the Schwarz lemma for analytic partial differential equations, 363.


HICKS, Troy L., and CARLSON, John W. Some quasi-uniform space examples, 204; Some properties of quasi-uniform structures, 206.

HIGGINS, John C. A characterization of a class of commutative semigroups, 609.


HINDS, Erol. W. See COCHRAN, James A.

HINKLE, Carl V., Jr. The injective hull of \( \mathcal{P} \)-torsionfree semigroups. Preliminary report, 1046.

HINTON, Don. See HEIDEI, John W.

HITZ, Reinhart. On certain polynomials occurring in Fleissner's dimension in a process with stable components—an interesting counterexample. Preliminary report, 1109.

HO, Chung-Wu. Spaces for which the fixed point property is characterized by homology groups, 223.

HOBS, Arthur M. Some Hamiltonian results in the square of a graph, 397: The square of a nonseparable graph is Hamiltonian connected, 553.


HOCHSTER, Melvin. Cohen–Macaulay rings of invariants, rings generated by monomials, and poly-

JEROSLOW, R. G. Canonical representations of formal systems. Preliminary report, 752.


JERRI, Abdul Jabbar. Sampling theorem for not necessarily finite energy signals, 521.

JESUP, Paul G. See CRONE, Lawrence J. ---. See FLEMING, Daniel J.

JOCKUSCH, Carl G., Jr. and SOARE, Robert I. Degrees of members of \( \Pi^0_1 \) classes, 422; Degrees in which the recursive sets are uniformly recursive, 1086.

JODEIT, Max A., Jr. See FEFFERMAN, Charles.

JOHNSON, Charles S., Jr., and McMORRIS, Fred R. Injective hulls of certain S-systems over a semilattice, 801.


JOHNSON, Donald B. See WALL, Charles R.

JOHNSON, Jerry A. A lemma of de Leeuw's on extreme points, 176.


JOHNSON, Lee W. See RIESS, R.D.

JOHNSON, Lee W., and RIESS, R.D. A procedure for estimating \( E_n(f) \), 1061.


JOHNSON, William B. Operator and dual operator bases in linear topological spaces, 189.

JOLLY, William B. Operator and dual operator bases in linear topological spaces, 189.

JONES, Gary D. Oscillation properties of third order differential equations, 774.

JONES, John, Jr. Solutions of certain matrix equations. III, 114.

JONES, Ralph. Riemann surfaces are unions of two open disks. 383; Open n-manifolds are unions of n open n-cells, 441: Combinatorially triangulating 4-manifolds. Preliminary report, 929.


---. See GRATZER, George A.

JORGENSEN, Murray A. Images of ultrafilters and cardinality of ultrapowers. Preliminary report, 826; Regular ultrapowers and long ultrapowers. Preliminary report, 928.

JOSHI, Chandra Mohan, and Mc DONALD, J. B. Some finite summation theorems and an asymptotic expansion for the generalized hypergeometric series. Preliminary report, 156.

JOSHI, Kapil D. A characterization of plane ANR's by existence of local means, 981; On Lebesgue metrics, 1110.


JUMAB, Vishnu B. Quantization—for minimum error. Preliminary report, 616.


KAGAN, Joel, and QUACKENBUSH, Robert W. Self-dual topological Boolean algebras, 95.

KAHNER, David Kenneth. Minimum norm differentiation formulas, 234.


KAIRIES, Hans-Heinrich. See DICKEY, Leroy J.

KAISER, Klaus. Embedding properties, 98.

KALMANSON, Kenneth. Dual necklaces of \( n \)-dimensional cubes, 528.

KALME, John S. Approximation of signal quadrature components by a semigroup of operators, 429.

KALTON, Nigel J. See ELLIOTT, Robert J.


KAMMERER, William J. Local convergence of smooth cubic spline interpolates, 1061.

KANNAN, R. Some fixed point theorems in a reflexive Banach space, 387.

KANNAN, V. \( \mathcal{F} \)-Frechet spaces, 262; Notes in categorical topology, 832.

KANNAN, V., and RAMAKRISHNAN, P. V. Invariant means on Banach lattices, 647.

KANNAN, V., and THRIVIKRAMAN, T. A characterisation of the semilattice of compactifications, 677.

KANAPPAN, Palaniapan. On weak inverse property loops, 122.

KAPLAN, James. Absolutely stable differential equations which are not integrally stable, 161.

KAPLAN, Meyer M., and PINKHAM, Roger S. Numerical integration with complex exponential kernels, 236.

KAPPOOR, S. F. See BHAT, Vasant N. ---. See CHARTRAND, Gary.


KAPPE, Luise-Charlotte, and KAPPE, Wolfgang P. Properties of groups defined by normality conditions, 135.

KAPPE, Wolfgang P. Some subgroups given by identities, 134.

---. See KAPPE, Luise-Charlotte.

KARAM, Albert J. Strong Lie ideals, 247.

KARP, Samuel N. See SHAMMA, Shawky E.


KASDAN, Paul J. Weinerstrass pairs for some modular groups, 151.


KAZARINOFF, Nicholas D., and WEITZENKAMP, Roger. On existence of compound perfect squared squares, 754.


KELEMEN, Charles F. Actions by the bicyclic semigroup, 678.


KENNEBECK, Dean R. See WRIGHT, Fred M.

KENT, Darrell C., and RICHARDSON, Gary D. Regular compactifications of convergence spaces, 1067.
KUIPERS, Lawrence. See SHUT, Jau-Shyong.
KUMPERL, Paul C., Jr. p-equivalence of mod p H-spaces, 974.
KUNES, Laurence E. See de KORVIN, Andre.
KUTTY, K. Kumaran. Dedekind σ completion of a vector lattice, 649.
LACHER, R. Christopher. A finiteness condition for partially acyclic maps. Preliminary report, 976.
---. See BRYANT, John L.
LADAS, Gerasimos E., and LAKSHMIKANTHAM, V. Oscillations caused by retarded actions, 167. LADDE, Gangaroms. See LADAS, Gerasimos E. 
LADNER, Richard E. Mitotic r.e. sets. Preliminary report, 655; A r.e. set is autoreducible if and only if it is mitotic, 821.
LAIRD, Philip. Some properties of continuous mean periodic functions. Preliminary report, 780.
LAKSHMIKANTHAM, V. See HALLAM, Thomas G.
LAMBERG, Alan L. Unitary equivalence and reducibility of invertibly weighted shifts, 659.
LAMBERT, Joseph M. The weak sequential continuity of the metric projection in Lp spaces, 170; Property SAIN and L, 411.
LAMBERT, William M., Jr. Equivalence of search computability and schematic definability, 660.
LAMOTKE, Klaus. See CHURCH, Philip T.
LAMPE, William A. On the independence of certain related structures of a universal algebra. I. Partial algebras with useless operations and other lemmas, 822; On the independence of certain related structures of a universal algebra. II. The congruence lattice and automorphism group are independent, 305; On the independence of certain related structures of a universal algebra. III. The subalgebra lattice and congruence lattice are independent, 1092.
---. See GÄRTZER, George A.
LANE, Ernest P. See BOYTE, J. M.
LANGAN, Thomas J. On the existence of not necessarily unique solutions of semilinear hyperbolic systems in two independent variables, 775; Differential inequalities for semilinear hyperbolic operators with two independent variables, 1055.
LARMORE, Lawrence L. Isotopy groups. Preliminary report, 222.
LARSEN, Max D., and BROWN, David E. Separation of nonassociates by valuations, 785.
LARSON, Roland E. The lattice of topologies: A survey, 212.
LASKAR, Rene. See PELLERIN, Arthur.
LASOTA, A. See BERNFELD, Stephen R.
---. See STRAUSS, Aaron.
LAWRENCE, Scott. See SEGALMAN, Daniel.
LAWTON, Wayne M. No infinite dimensional compact group admits an expansive automorphism, 785.
LAY, Steven R. A generalized Kirchberger theorem, 201.
LAZAROV, Connor. See LANDWEBER, Peter S.
LAZER, A. C., and SCHNEIDER, Leo J. The linear selfadjoint differential equation and a quadratic functional, 595.
LAZER, Alan C. See AHMAD, Shair.
LEA, James W., Jr. An embedding theorem for compact lattices, 1039.
LEE, Boo Sang. On univalent entire functions, 145.
LEE, R. A. See CUSICK, Thomas W.
LEE, Sin-Min. On pseudo-rings which are disjoint unions of rings. Preliminary report, 396; Equational class of rings generated by all zero rings and a finite number of Galois fields, 548; Equational classes of idemconstant semigroups and rings, 618; Semigroups and rings satisfying (xy)3 = xy = x2y2, 795; Lattice of equational subclasses of distributive semigroups, 938.
LEECH, J. E. Congruences under <. Preliminary report, 1044.
LEGER, George F., and LUKS, Eugene M. Nilpotent groups of algebra automorphisms, 124; Cohomology theorems for Borel-like solvable Lie algebras, 762.
LEHMNER, Derrick H. Multisectioned moments of Stirling numbers of the second kind, 538.
LEPSFON, Benjamín. An interpolation property of entire functions with nonnegative coefficients, 524.
LEPSFON, India. The slope of a function, 523: The reduced set of residues mod 110, 756.
LERMAN, Manuel. The finite injury priority argument in r-recursive theory, 1085.
LEUNG, Anthony. Connection formulas for asympto-
tic solutions of second order turning points in unbounded domains. Preliminary report, 411.
LEUTWILER, Heinz. See ARSOVE, Maynard G.
LevAN, Marijo O. See CHAWLA, Lal M.
LeVIN, Mark D., and McARTHUR, C. W. Order characterizations of unconditioned and absolute Schauder bases, 180.
LEVINE, Lawrence E. Entropy and simple waves, 527.
LEVINGER, Bernard W., and McARTHUR, C. W. Preliminary report, 224.
—. Another characterization of Dedekind domains. 530; Decomposable braids and linkages. Preliminary report, 507; Knot and linkage projections. Preliminary report, 925.
LEVITZ, Kathleen B. A holographic repre­forms of connectivity. Preliminary report, 617.
LEVITZ, Kathleen B. Another characterization of Dedekind domains. Preliminary report, 925.
LEVITZ, Kathleen B. Presentations of infinite symmetric groups, 943.
LEVITZ, Kathleen B. Graphs of semirings. II, 93.
LEVITZ, Kathleen B. Partial latin squares, quasigroups, and loops, 394; Polycyclic groups and rings. Preliminary report, 977.
LEVITZ, Kathleen B. A characterization of n-connected graphs, 943.
LEVITZ, Kathleen B. Topological applications of transformations of group presentations. Preliminary report, 224.
LEVITZ, Kathleen B. Presentations of infinite symmetric groups, 943.
LEVITZ, Kathleen B. Graphs of semirings. II, 93.
LEVITZ, Kathleen B. Partial latin squares, quasigroups, and loops, 394; Polycyclic groups and rings. Preliminary report, 977.
LEVITZ, Kathleen B. A characterization of n-connected graphs, 943.
LEVITZ, Kathleen B. Topological applications of transformations of group presentations. Preliminary report, 224.
LEVITZ, Kathleen B. Presentations of infinite symmetric groups, 943.
LEVITZ, Kathleen B. Graphs of semirings. II, 93.
LEVITZ, Kathleen B. Partial latin squares, quasigroups, and loops, 394; Polycyclic groups and rings. Preliminary report, 977.
LEVITZ, Kathleen B. A characterization of n-connected graphs, 943.
LEVITZ, Kathleen B. Topological applications of transformations of group presentations. Preliminary report, 224.
LEVITZ, Kathleen B. Presentations of infinite symmetric groups, 943.
LEVITZ, Kathleen B. Graphs of semirings. II, 93.
LEVITZ, Kathleen B. Partial latin squares, quasigroups, and loops, 394; Polycyclic groups and rings. Preliminary report, 977.
LEVITZ, Kathleen B. A characterization of n-connected graphs, 943.
LEVITZ, Kathleen B. Topological applications of transformations of group presentations. Preliminary report, 224.
LEVITZ, Kathleen B. Presentations of infinite symmetric groups, 943.
LEVITZ, Kathleen B. Graphs of semirings. II, 93.
LEVITZ, Kathleen B. Partial latin squares, quasigroups, and loops, 394; Polycyclic groups and rings. Preliminary report, 977.
LEVITZ, Kathleen B. A characterization of n-connected graphs, 943.
LEVITZ, Kathleen B. Topological applications of transformations of group presentations. Preliminary report, 224.
LEVITZ, Kathleen B. Presentations of infinite symmetric groups, 943.
LEVITZ, Kathleen B. Graphs of semirings. II, 93.
LEVITZ, Kathleen B. Partial latin squares, quasigroups, and loops, 394; Polycyclic groups and rings. Preliminary report, 977.
LEVITZ, Kathleen B. A characterization of n-connected graphs, 943.
LEVITZ, Kathleen B. Topological applications of transformations of group presentations. Preliminary report, 224.
LEVITZ, Kathleen B. Presentations of infinite symmetric groups, 943.
LEVITZ, Kathleen B. Graphs of semirings. II, 93.
LEVITZ, Kathleen B. Partial latin squares, quasigroups, and loops, 394; Polycyclic groups and rings. Preliminary report, 977.
LEVITZ, Kathleen B. A characterization of n-connected graphs, 943.
LEVITZ, Kathleen B. Topological applications of transformations of group presentations. Preliminary report, 224.
LEVITZ, Kathleen B. Presentations of infinite symmetric groups, 943.
LEVITZ, Kathleen B. Graphs of semirings. II, 93.
LEVITZ, Kathleen B. Partial latin squares, quasigroups, and loops, 394; Polycyclic groups and rings. Preliminary report, 977.
LEVITZ, Kathleen B. A characterization of n-connected graphs, 943.
LEVITZ, Kathleen B. Topological applications of transformations of group presentations. Preliminary report, 224.
LEVITZ, Kathleen B. Presentations of infinite symmetric groups, 943.
LEVITZ, Kathleen B. Graphs of semirings. II, 93.
LEVITZ, Kathleen B. Partial latin squares, quasigroups, and loops, 394; Polycyclic groups and rings. Preliminary report, 977.
McNAUGHTON, Robert, and ZALCSTEIN, Yechezkel, that are rings, 117.
McNULTY, George F. Base-decidable theories and irredundant bases, 592.
McPHERSON, James M. The Reidemeister-Schreier subgroup algorithm, 681.
McQUARRIE, Bruce C. Endomorphism near rings that are rings, 117.
---. See LIGH, Steve.
MENDELSOHN, Eric. Any group is the collineation group of a projective plane, 433.
MENDELSOHN, N. S., and HUNG, Stephen H. Y. On the Steiner systems S(3, 4, 14) and S(4, 5, 15), 532; 792; On Howell designs. Preliminary report, 941.
MERICLE, R. Bruce. The regular decomposition of a measure. Preliminary report, 140.
METROPOLIS, Nicholas C. See EVERETT, C. J.
MILES, Joseph B. Zero sets in $H^p(U^n)$, 1077.
MILLER, James E. Starlike meromorphic functions. Preliminary report, 635.
MILLER, Kenneth S., and ROCHWARGER, M. A covariance approach to spectral moment estimation, 828.
MILLER, Sanford S. The Hardy class of Bazilevic functions and their derivatives, 145.
MILLET, Kenneth C. Homotopy sequences of fibrations, 441.
MINASSIAN, Donald P. On the direct product of V-groups, 943; On extensions of orders in abelian groups, 1075.
MINOR, Lee H. Pseudo-expansive maps and transformation groups, 787; The relationship of pseudo-expansiveness, expansiveness, and recurrence in transformation groups, 1070.
MISLIN, Guido. See GLOVER, Henry H.
MITCHELL, Barry M. The vanishing of the derived functors of the inverse limit functor, 632.
MODE, Charles J. A limit theorem for age-dependent branching processes with arbitrary state space, 231.
MOEN, Selmer O. Free derivation modules and a question of Klee. Preliminary report, 553; Free derivation modules and a question of Klee. Preliminary report, 553; The order of starlikeness of certain univalent functions, 815.
MOORE, Lawrence C., Jr. Strictly increasing Riesz norms, 187.
MORAN, Daniel A. A residual ANR which is not strongly residual, 431.
MORASH, Ronald P. The orthomodular identity and metric completeness of the coordinatizing division ring, 96.
MOREL, Anne C. Maximally C-dependent algebras. Preliminary report, 509.
MORRIS, Sidney A. A topological group characterization of those locally convex spaces having their weak topology, 810; Quotient groups of topological groups with no small subgroups, 973; Markov and Graev free topological groups, 1110.
---. See DIESTEL, Joseph.
---. See SAXON, Stephen A.
MORSE, Anthony P., and PFAFF, Donald C. Separative relations for measures, 542.
MOSCHOVAKIS, Yiannis N. Classical descriptive set theory as a refinement of modern hierarchy theory. Preliminary report, 1089.
MOSER, Louise E. See EVANS, Benny.
MOSHER, James R. See DULIN, Bill J.
MOSHER, Robert E. Semitensor products as Hopf algebras. Preliminary report, 545.
MOZZOCHI, C. J. On a proof of R. A. Hunt, 249; On Lorentz spaces and the boundedness of the M operator, 646.
MROWKA, Stanislaw G. The Sorgenfrey plane $S^2$ is strongly 0-dimensional, 981.
---. See FAJTLOWICZ, Siemion.
MUELLER-ROEMER, Peter R. A noncommutative, noncompact group with tauberian group algebra, 230.
MUKHERJEA, Arunava. On the equation $P(B) = \int P(Bx)P(dx)$, 175; MUKHERJEA, Kalyan K. New methods in coincidence theory, 384.
MULDOON, Martin E. Some characterizations of the gamma function, 653.
MULLER, George M. Linear iteration and summability, II, 643; Linear iteration and summability, III, 812, 984.
MUNDORFF, P. See ALLEN, Richard C., Jr.
MURPHY, F. X., Jr., and SANDRI, Guido. Uni-
formulation of asymptotic expansions with the methods of Poincaré and Lighthill, "Multiple time scales," "Extension", 928.
MUSKAT, Joseph B. On the representations of primes by different binary quadratic forms, 756.
MYCIELSKI, Jan. A lattice connected with relative interpretability of theories, 984.
MYERS, Dale W. The Boolean algebras of two elementary theories, 564; Separation properties for first-order languages, 824.
NAIMPALLY, S. A. See RAO, C. J. M. ---. See SHARMA, P. L.
NAJAR, Rudolph M. A commutative diagram for the generalized inflation-restriction exact sequence. Preliminary report, 126.
NAGEL, Ole, and PALKA, Bruce P. Uniformly equiconnected families of conformal and quasiconformal mappings. Preliminary report, 1080.
NASH, David. Simply invariant subspaces on finite bordered Riemann surfaces, 958.
NATHANSON, Melvyn Bernard. A problem of Stöhr in additive number theory, 100; Sums of finite sets of integers, 1048.
NEGGERIS, Joe. See CHWE, B. S.
NEGREPONTIS, Joan W. Duality of functors in the category of Banach spaces, 959.
NEGREPONTIS, Stelios. The growth of subuniform ultrafilters, 824.
---. See COMFORT, W. Wistar.
NEL, Louis D. Lattices of lower semicontinuous functions and topological spaces determined by them, 217; Classes of epimorphisms and monomorphisms and factorization. Preliminary report, 1099.
NEL, Louis D. and WILSON, R. G. Epireflections in the category of T_0-spaces, 570.
NELSON, James D. A characterization of zero sets for A^0, 184.
NEUMANN, Dean. Heegaard splittings of homology 3-spheres. Preliminary report, 980.
NEUZIL, John P. Embedding the dunce hat in E^4, 788.
NICHOLSON, Victor A. Tame and nice are equivalent in 3-manifolds, 834.
NICKEL, Paul A. Linear topologies for continuity of Sario's linear operator method, 922.
NICOL, Charles A. Arithmetic formulas for some complementing sequences, 99.
NIEDERREITER, Harald G. Systems of polynomial equations in finite fields, 104; Sums of polynomials as permutation polynomials, 360.
NIKOL, Gregory M., BARNHILL, Robert E., and FLEGAL, Robert M. Probabilistic surface representation and computer graphics, 236.
NILLSEN, Rodney. Extreme amenability of the algebra generated by semicharacters, 557.
NIRENBERG, Ricardo. A holomorphic extension theorem for real submanifolds of C^n, 1084.
NISHIURA, Togo, and IEHEE, Choon-Jai. The hyper-space of a pseudoarc is a Cantor manifold, 437.
---. See LEACH, Ronald J.
NORDALHAV, T. E. See TAMURA, Takayuki.
NORRIS, Eugene M. The Hausdorffication functor, 784.
---. See BEDNAREK, Alexander R.
NORTON, Karl K. On the distribution of power residues and nonresidues, 634.
NOWITZ, Lewis A. See WATKINS, Mark E.
NUSSBAUM, Roger D. An asymptotic fixed point theorem, 384.
NYKOS, Peter J. The N-compactification of Prabir Roy's space Δ. Preliminary report, 439.
OBERAI, Kirti K. See DOLLINGER, Michael B.
OBROCK, Arthur E. On bounded oscillation and asymptotic values of conformal strip mappings, 1079.
O'CONNELL, John M. F. Real parts of uniform algebras. Preliminary report, 250; Real parts of uniform algebras. II. Preliminary report, 558.
OHME, Paul. On the asymptotic behavior of the solutions of the third order nonlinear differential equation u''' - τ^a u^3 = 0. Preliminary report, 162.
OLSON, Keith B. See SCOTT, William R.
OLSON, Lloyd D. See UEHARA, Hiroshi.
OLSON, Milton Philip. Spectral theorem and lattice properties in Bp-algebras, 190.
O' MALLEY, Matthew. See GILMER, Robert.
O'MALLEY, Richard J. Strict essential minima, 1078.
O'NEIL, Peter V. Generalized m-series in tree counting. Preliminary report, 91.
ORDMAN, Edward T. Factoring a free abelian group as a direct product with amalgamation. Preliminary report, 129.
ORKOV, Peter P., and WAGREICH, Philip D. "Algebraic" 5-manifolds with fixed point free circle action, 1089.
ORTIZ, Augusto H. On a special class of modules. Preliminary report, 118; A construction in general radical theory, 392.
---. See GOULDING, T. L.
ORZECH, M. See CHWE, B. S.
OSBORNE, Richard P. See LEVINGER, Bernard W.
case of the Leibniz rule for fractional derivatives, 145; An integral analogue of Taylor's series. Preliminary report, 520.

OSSA, Erich. See HAMRICK, Gary C.

OSTERWEIL, Leon J. An enumeration theorem and some applications to graph enumeration. Preliminary report, 400.

OTTO, Albert D., and DAVITT, Richard Michael. The automorphism group of a p-group with the central quotient metacyclic, 127.

OVERTON, Robert H. Čech homology for movable compacta, 838.

OW, Wellington H. See GOLDSTEIN, Myron.

OWINGS, James C., Jr. Diagonalization and the recursion theorem, 1087.


PADMANABHAN, R. Equational theory of idempotent algebras, 629; Characterization of a class of group-oids, 797.

PAGE, Lavon Barry, Factoring operators which commute with a normal operator, 198.

PAGE, Stanley S. Properties of quotient rings, 549; Flat covers, 624.

PAI, D. V. Proximal points of convex sets in normed linear spaces, 951.


PALKA, Bruce P. See NÄKKI, Raimo.

PANKIN, Mark D. On finite projective planes of Lenz-Barlotti type I-4, 506.

PAPADAKIS, Mark D. Minimal norms for functions whose initial segments have norm one, 644.


PARKS, James M. A cohomology theory with co-efficients in a sheaf of H-spaces, 680; Locally constant sheaves, mapping theorems and continuity, 831.

PARNES, Milton N. On g-invariant measures, 1075.

PARZYNSKI, William A. A spectral decomposition, 195.

PATEL, D. J. See HALL, Robert L.

PATNAIK, Surendra-Nath. A Lefschetz fixed point theorem for spaces with finite group action, 432.

PAUL, Jerome L. A certain sequence of combinatorial identities, 93.

PAYNE, Stanley E. Generalized quadrangles as amalgamations of projective planes, 112.

PAZIRANDEH, Joao B. Weighted spaces of vector-valued functions which have no Laplace transformations. Preliminary report, 251.

PERRYMAN, John K. Integral transformations for functions which are bounded by Mebius and 415.


PETTIS, Billy J. On some theorems of Sierpinski on subalgebras of Boolean σ-rings, 524.

PFRAFF, Donald C. See MORSE, Anthony P.

PICHORIDES, Stylianos K. On the best values of the constants in the theorems of M. Riesz, Zygmund and Kolmogorov, 644.

PIERCE, Keith R. Amalgamations of lattice ordered groups, 946.

PINKHAM, Roger S. See KAPLAN, Meyer M.


Stochastic integral representations of multiplicative operator functionals of a Wiener process, 829.

PITTENGER, A. O. Last exit times and the Q-matrices of Markov chains, 229.

PLEMMONS, Robert J. See BERNAN, Abraham.

PLESS, Vera S. Self-orthogonal codes of half dimension over GF(2), 754.


POOLE, George D. Abelian groups which are quasi-injective as modules over their endomorphism rings. Preliminary report, 934; Berge's theorem for infinite tournaments, 1091.

POREDA, Stanley J. Limits of best uniform deviations, 517; A characterization of approximable functions, 648.

POREDA, Stanley J., and SHAPIRO, George S. Minimal norms for functions whose initial segments have norm one, 644.

PORTER, A. Duane. See DALLA, Ronald H.


POWERLY, Mary E. Expansions of normal T1 spaces, 676; Some theorems on topological expansions, 785.

POWERS, Michael J. Lefschetz fixed point theorems, 568; Fixed point theorems for noncompact approximative ANR's, 678.

PRATT, Philip J. A representation theorem for functions holomorphic in the disk. Preliminary report, 143.

PREKSENDIS, Kenneth. A theorem on polynomials in z and Z. Preliminary report, 512.


Saworotnow, Parfeny P. Generalized positive linear functionals on a Banach algebra with an involution, 516.


Saxon, Stephen A., Morris, Sidney A., and Brooks, M. S. Generating varieties of topological groups, 600.


Scarpellini, Bruno J. A system of classical analysis, 413.


Schaefer, Paul T. \( \sigma \)-conservative and \( \sigma \)-regular matrices, 639.

Schaefer, Philip W. A priori bounds in the Cauchy problem for coupled elliptic systems, 164; On the Cauchy problem for the nonlinear biharmonic equation, 363.

Schecter, Martin. Compact Sobolev embeddings, 415.

---. See Snow, Morris.


Schielbusch, L. Sylow subgroups of simple groups. Preliminary report, 801.


Schneider, Chester. Hyperbolic \( \mathbb{R}^n \) actions on 2-manifolds, 229.

Schneider, Leo J. Oscillatory properties of linear selfadjoint fourth order differential equations, 559.

---. See LaZer, A. C.

Schneider, Walter J. See BARTH, Karl F.

Schochtenma, Irwin, and Busby, Robert C. Compact induced representations, 174.

Scholz, Uwe K. The Nielsen fixed point theory for Palais maps. Preliminary report, 222.

Schonefeld, Steven A. On the existence of Schauder bases in spaces \( C^k(M^3) \), 184.

Schulenberg, John R., and Wilcox, Calvin H. A coerciveness inequality for a class of nonelliptic operators of constant deficit, 185.

Schulte, Larry. Quadrature-Galerkin approximations to solutions of elliptic differential equations, 381.


Schuster, Seymour. See Charttrand, Gary.

Schwabauer, Robert J. Covering conditions and variety lattices, 1047.

Schwartz, Benjamin L. A single-label, maximum-flow algorithm, 791.


---. See Howes, Norman R.

Scott, John B. See Etgen, Garret J.


Scott, William R., Hanes, Harold B., Jr., and Olson, Keith B. Products of simple groups, 536.


Segalman, Daniel, and Lawrence, Scott. Generalization of an inequality of Levinson and Fan, 1082.

Sehnert, James E. An analogue of Minkowski's conjecture over the fields of Gauss and Eisenstein.

---. See Frank, James L.

Shawyer, Bruce L. R., and Yang, G. S. On the relation between Abelian-type and Borel-type methods.
STEWART, B. M. See NORDHAUS, Edward A.

STINEBRICKNER, Ralph P. On maximal Goldie subrings of semiprime Goldie rings which are not prime, 404.

STOLARSKY, Kenneth B. See ALEXANDER, Ralph.

STOLL, Manfred. Vitali's theorem for harmonic functions on symmetric spaces of noncompact type, 135.

STOLLENBERG, Stine.

STONER, M. H. Localization and colocalization in universal algebra, 98; Topological cauchy spaces, 834.

STONE, Lawrence D. Total optimality of incrementally optimal allocations, 582.

STONE, William M. See CLENENN, Warren G.

STOOPS, Glenn A. See WANG, Peter C. -C.


STRALLKA, Albert R. Extending congruences on...

STRATIGOS, P. Preliminary report, 404.

STRANG, Gilbert. The finite element method, 376.

STRASSEN, V. Variations of Korn's and Sobolev's inequalities, 962.

SABBADO, Albert R. Extending congruences on...

SU, boots, D. Localization and colocalization in universal algebra, 98: Topological cauchy spaces, 834.

SUGA, Tatsuo. Compact quotient spaces of $C^*$ by affine transformation groups, 1090.


SWMINATAN, Srinivas. See JAMES, Robert C.

SZETYKI, Paweł. See ARONSOJN, Nachman.

SZETO, George. The realization of modules and the Schur index, 115.

TAKEUI, Gaisi. The Axiom of Determinateness and a cut elimination theorem, 604.

TALBOT, Walter R. See BOHUN-CHUDYNIV, Volodymyr.

TALL, Frank D. A set-theoretic proposition implying the metrizability of normal Moore spaces, 264, 792; Normal nonmetrizable Moore spaces with dense metrizable subspaces. Preliminary report, 444; On the existence of metacompatible normal Moore spaces (perfectly normal spaces with $\sigma$-point-finite bases) which are not metrizable, 670, 842.

TAMARI, Dov. Formule for well formed formulae (w. f. i.), 925.


TAN, Koen. Some group-rings which are orders in arithin rings. Preliminary report, 398.

TAN, Kok-Keong. Remarks on mappings with diminishing orbital diameters. Preliminary report, 437; A common fixed point theorem for weakly periodic nonexpansive mappings in $T_2$-l.c.s. Preliminary report, 555.

TAN, Kok-Kong, and Lim, Teck-Cheong. C-compact and C-closed spaces, 677.

TANAKA, Hisao. $\Pi^1_1$-sets of sets and hyperdegrees, 1087.


TANGEMAN, Richard L. Generation closed classes of rings, 123.

TAPIA, M. See BOLLMAN, D. A.


TEACHER, Tommy K. On the Engel margin, 130.

TEIPLE, Michael. See DURIS, Charles S.

TEPPER, David E. See MCCARTY, Carl P.


TEXTOR, Robin E. On a singular Cauchy problem for a nonlinear hyperbolic equation, 1058.


THOMAS, B. V. S. See FRANKLIN, Stanley P.


THOMAS, J. M. The four color theorem, 782.


THOMASON, Steven K. Semantics for tense logics, 1107.

THORNTON, Melvin C. Torsion topological groups with minimal open sets, 441; Spaces with given homeomorphism groups, 673; Semirings of functions determine finite $T_0$ topologies, 1112.

THORNTON, Melvin C., and SURKAN, Alvin J. Finite semigroups of continuous functions, 940.


---. See KANNAN, V.


TODD, Aaron R. See SAXON, Stephen A.

TONG, Richard J. Monotone unions of compact manifolds minus a point, 679.

TONNE, Philip C. Linear transformations on the power-series convergent on the unit disc which have matrix representations. Preliminary report, 374.

TORALBALLLA, Leopoldo V. A general geometric theory of surface area, 199.

TOUBASSI, Elias. On the splitting of mixed groups of torsion-free rank one, 129.

TRACY, Derrick S. See GUPTA, B. C.


TRAPP, George E., Jr. See ANDERSON, William N., Jr.

TRAVIS, Curtis C. Oscillation theorems for second-order differential equations with functional arguments, 1054.

---. See KREITH, Kurt.

TRECHN, William F. Strong minimum variance estimation of polynomial plus random noise, 237, 842.


TSOKOS, Chris P. See PADGETT, W. J.

TUCKER, Charles T. Sequentially relatively uniformly complete Riesz spaces and Vulikh algebras, 923.

TUCKERMAN, Bryant. The 24th Mersenne prime, 608.

TUNNELL, Jerrold. Countable compactness properties and closed refinements, 439.


TURNDGGE, Darrell R. See CUNNINGHAM, Robert S.


UCCI, J. J. Symmetric maps of spheres, 973.


UEHARA, Hiroshi, BRENNEMAN, Franklin S., and OLSON, Lloyd D. A comparison theorem in fibred categories, 396.


ULLMAN, Joseph L. The possibility of irregular behavior for orthogonal polynomials. Preliminary report, 171.

ULLOM, Stephen V. See REINER, Irving.

UMEZAWA, Toshio, See READE, Maxwell O.


On an integral transform related to the wave and to the heat equations. Preliminary report, 1100.


VAN METER, Garrett O. II. The 2m-dimensional disc algebra. Preliminary report, 779.

VAN METER, Robert G. Generalized $k$-linear equations over a finite field, 757.

VANOSDOL, Donavan H. Coalgebras, sheaves, and cohomology, 764.

VARINEAU, Verne J. See JOHNSON, Larry S.


VAUGHAN, Jerry E. Linearly stratifiable spaces, 210; Linearly stratifiable spaces and a definition given by H. Tamano, 786.


VEECH, William A. Substitutions of nonconstant length, 390.

VEITH, Wilbur P. Amerio-Doss theorems on Banach valued almost periodic functions, 174.


VICK, James W. Orientability and Poincare duality in generalized homology theories. Preliminary report, 221.

VIGLINO, Giovanni A. Extensions of functions and spaces, 832.

VILLARINO, Mark B. See ALTER, Ronald.


VITTER, Al. The classification of affine compact complex analytic surfaces, 525.

VOEJLER, Dietrich H. On a class of polynomials. Preliminary report, 800.

VOLK, Benjamin. A coefficient region, 412; Method, 681.

VOTAW, Charles I. See PORTER, Jack R.


WAGNER, Daniel H., and STONE, Lawrence D. Necessity and existence results on constrained optimization of separable functionals by a multiplier rule, 526.


WAGREICH, William N., Jr. See ORLIK, Peter P.

WAGSTAFF, Samuel S., Jr. Infinite matroids, 97.


WAID, Margaret C. Second order time degenerate parabolic equations, 953.


WALKER, Homer F. On the null-spaces of elliptic partial differential operators in $R^n$.

WALKER, Philip W. Weighted differential operators in the limit-point case. Preliminary report, 163.

WALL, Charles R. The fifth unitary perfect number, 650; Bi-unitary perfect numbers, 806.

WALL, Charles R., JOHNSON, Donald B., and
Crews, Philip L. - Density bounds for the sum of divisors function, 636.


Waller, Alexander D. - Skewly associative groupoids, 1063.


Walter, Martin E. - $W^r$-algebras and nonabelian harmonic analysis, 182.

Walters, Peter. - Some invariant $\sigma$-algebras for measure-preserving transformations, 391.

Wang, Jeou-Hwa. - Solutions of the wave equation in an exterior characteristic quadratic, 165.

Wang, Kai. - Free smooth actions of $S^1$ and $S^3$ on manifolds. Preliminary report, 978.

Ward, James R. - The semigroup of doubly stochastic homotopy spheres, 383.

Ward, Lewis, Jr. - Fixed points of monotone surjections, 442.

Wardlaw, W. - Minima of completions, 216.

Ward, Lewis, Jr. - Quasi-complementation in separable locally convex spaces, 178.

Warnay, Peter C.-C., and Stoops, Glenn A. - Overlapping recurrent patterns, 789.

Ward, Lewis, Jr. - Integrally parameterized Chevalley groups, 133.

Wash, William A. - A number theoretic sum involving divisors of polynomial values, 755.


Webber, Robert. - The diffeomorphism group of a standard Brownian motion, 228.

Weber, James K., Jr. - The Ramsey number $N(3,3,3,3;2)$, 923.

Weber, James K., Jr. - The Ramsey number $N(3,3,3,3;2)$, 923.

Weis, Paul. - Characterizations of a time distribution of a Lévy process, 228.

Wass, Wolfgang R. - Adiabatic invariance of a simple oscillator, 1101.

Watana, Hisao. - See Qualls, Clifford R.

Waterman, Daniel. - Convergence of Fourier series of functions of generalized bounded variation, 518.

Wats, Mark E., and Watts, Lewis A. - Graphical regular representations of nonabelian groups, 358.

Watkins, Mark E., and Covington, Bill. - Manifold maps which commute with the Laplacian on $p$-forms, 616.

Wayment, Stanley G. - A derivative to match the $v$-integral, 612.

Webb, William A. - A number theoretic sum involving divisors of polynomial values, 755.

Webber, Robert. - The matrix semigroup determined by the spectral norm. Preliminary report, 1047.


Weinba, Carl. - The word problem and tame, prime, alternating knots. Preliminary report, 87.


Weinstock, Barnet. - Approximation by homomorphic functions on certain product sets in $C^\nu$, 962.

Weir, Maurice D. - See ALO, Richard A.

Weiss, Paul. - A generating function for monomial symmetric functions, 510.


Wheal, Thomas. - Comparison of finite types by congruence relations, 941.

Wheatley, Patrick Owen. - Inverse limits and the fixed point property for set valued maps. Preliminary report, 546; Induced homomorphisms for set valued maps, 982.

Wheel, Mary Fanett. - A priori $L^2$-error estimates for Galerkin approximations to parabolic partial differential equations, 377.

Wherrett, Robert. - First-order equality logic with weak existential assumptions, 80.

White, Arthur T. - See Nordhaus, Edward A.


Whitehead, Carl Glen, Jr. - The Ramsey number $N(3,3,3,3;2)$, 923.


Wilcox, Calvin H. - See Schulenberger, John R.


Willet, Douglas W. - Generalized de la Vallée Poussin differencial conjugacy theory, 785.

Williams, James L. - Quotients determined by a $\varepsilon$-closed relation, 182.

Williams, R. Douglas. - Primary ideals in rings of analytic functions, 758.


Willig, Paul. - Central sequences, generators, and direct integral decompositions of $W^*$-algebras. Preliminary report, 178; Type II $W^*$-algebras are not normal, 810; On hyperfinite $W^*$- algebras, 954.


Wilson, Jack D. - Cyclicly descriptive Moore spaces, 209; A notion of convexity in certain topologically flat spaces, 443.

Wilson, Richard G. - See Demarco, G.

Wilson, Richard G. - See NEL, Louis D.

Wilson, Richard M. - Concerning the number of mutually orthogonal Latin squares, 805.


Wilson, Robert Lee. - A characterization of $p$-reductive Lie algebras, 123.

Wimp, Jet. - Gronwall-type inequalities for sum equations, 168.

Wing, G. Milton. - See Allen, Richard C., Jr.
WINTHROP, Joel A. A natural transformation on Extₐ, 356.


WOLFF, Harvey E. Y-localizations and Y-triples, 123; Monads and monoids on symmetric monoidal closed categories, 944.

WONG, Chi Song. A fixed point theorem for certain functions on a complete Hausdorff uniform space, 191.

WONG, James C. S. Invariant means on topological semigroups and representations, 250.

WONGS, Tin-Kin. See ITO, Takashi.

WONG, Yen-Yi. Functions with values distributed almost on a line, 444.


WRIGHT, Fred M., and KENNEBECK, Dean R. A class of nonlinear operators, 544.

WRIGHT, Howard H. See HARDY, Kenneth.

WOOD, Bruce. See EISENBERG, Sheldon M.

WOOD, Catherine. Multiple zeros of polynomials, 235.

WOOD, Craig A., and BERTHOLF, Dennis E. \(u\)-rings for which each proper homomorphic image is a multi­plication ring, 109.

WOODRUFF, Edythe P. Disks in \(E^3/G\), 783.

WOODS, Russell Grant. Irreducible images of remainders of Stone-Cech compactifications, 435.

---. See HARDY, Kenneth.

---. See MACK, John E.


WOODWARD, Gordon S. A class of thin sets in Fourier analysis. Preliminary report, 519.


WOODWARD, Walter R. Fixed point theorems for a class of nonlinear operators, 524.


---. See WICKE, Howard H.

WRIGHT, E. M. Decreasing probability of connected­ness of a graph as number of edges increases. Preliminary report, 1094.

WRIGHT, Fred M., and KENNEBECK, Dean R. A direct approach to a product integral representation for a Gro­mwall inequality, 142; The Gronwall inequality for weighted integrals, 143; On the definition and existence of an (LIR)-refinement integral, 769.

WRIGHT, Michael J. On the prolongations of a finite rank valuation, 10.

WRIGHT, Robert K. Asymptotic compatibility of second-order solutions with coefficient fields of logarithmic type, 371.


WULBERT, Daniel E. Nonlinear approximation, 544.

WULCZYN, Gregory. Pythagorean and triangular number triples, 106; On representations of generalized polygonal numbers as the sum of two such numbers in m ways, 755.

YAMADA, Toshihiko. Characterization of the simple components of the group algebras over the p-adic number field, 129; Simple components of group algebras \(Q[G]\) which are central over real quadratic fields, 508; Simple components of group algebras \(Q[G]\) which are central over totally real fields, 756; Central simple algebras over real quadratic fields which appear in some \(Q[G]\), 924.

YANG, Chung-Chun. On meromorphic functions with values distributed almost on a line, 444.

---. See SHAWYER, Bruce L. R.

---. See REILLY, Ivan L.

---. See READE, Maxwell O.

---. See REALE, Maxwell O.

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INDEX, Volume 18 (1971)

ABSTRACTS OF CONTRIBUTED PAPERS, 85, 354, 505, 609, 751, 922, 1038
Errata—Volume 9, 984
Volume 17, 444
Volume 18, 444, 617, 792, 842, 984
Index of Abstracts—Volume 18, 1241

ACTIVITIES OF OTHER ASSOCIATIONS, 58

ADVERTISERS, INDEX TO, 303, 463, 576, 687, 848, 992, 1119

ASSISTANTSHIPS AND FELLOWSHIPS
In Mathematics in 1971-1972 (Supplementary list), 335
Errata, 337
In Mathematics in 1972-1973, 1123

BACKLOG OF MATHEMATICS RESEARCH JOURNALS, 351, 743

DOCTORATES CONFERRED
In 1969-1970 (Supplementary list), 60, 921
In 1970-1971, 885
In 1970-1971 (Supplementary list), 1034

FEATURE ARTICLES
A Rating of Graduate Programs, 338
CBMS Regional Conference Series in Mathematics, 64
Employment in Mathematical Sciences, 865
Employment of New Ph. D.'s, 1021
Mathematical Offprint Service, 590
National Science Foundation Budget for 1972, 352
Norbert Wiener Prize Acceptance Speech, 491
Some Super-classics of Mathematics, 723
Statement of Employment of Ph. D.'s in Mathematics, 486
The Problem of Employment in Mathematical Sciences, 718

LETTERS TO THE EDITOR, 69, 341, 502, 592, 731, 878, 1020
Robert D. M. Accola, 343
Anatole Beck, 594
Elizabeth Berman, 341
Simeon M. Berman, 592
Stephen S. Boyce, 70
Kermit G. Clemans, 594
J. A. Dieudonné, 593
Bernard Epstein, 344
M. Solveig Espelie, 1020
Carl Faith, 592
M. C. Goodall, 70
Colin S. Graham, 71
Henry E. Heatherly, 732
Robert Hermann, 343
Peter J. Hilton, 342
Arthur M. Hobbs, 732
Daniel Karpen, 732
James E. Keisler, 343
William Kruskal, 342
Eugène H. Lehman, 593
H. Melvin Lieberstein, 878
Saunders Mac Lane, 71
Walter Meyer, 878
Charles E. Rees, 504
I. Richard Savage, 342
Susan Schindler, 341
Ruth Silverman, 592
Jeremy J. Stone, 341
J. M. Thomas, 503
Alexander Doniphan Wallace, 731
William P. Wardlaw, 343
Peter R. Weidner, 71
Rotraut C. Weiss, 731
J. B. Wilker, 70
Mary B. Williams, 502
Fred Wright, 69

MEETINGS OF THE AMS
Abstracts of Contributed Papers, 85, 354, 505, 609, 751, 922, 1038
Calendar of Meetings, 2, 306, 466, 578
Preliminary Announcements
March: Chicago, Illinois, 53
April: New York, New York 56, 320
Monterey, California, 321
June: Corvallis, Oregon, 483
August: University Park, Pennsylvania, 484, 583
October: Cambridge, Massachusetts, 715
November: Auburn, Alabama, 715, 853
Milwaukee, Wisconsin, 717, 855
December: Philadelphia, Pennsylvania, 859
January: Las Vegas, Nevada, 857, 1011
March: New York, New York 1018
St. Louis, Missouri, 1019
Programs of the Meetings, 3, 307, 467, 579, 690, 850, 994
January: Atlantic City, New Jersey, 3
March: Chicago, Illinois, 307
April: New York, New York, 467
Monterey, California, 478
June: Corvallis, Oregon, 579
August: University Park, Pennsylvania, 690
October: Cambridge, Massachusetts, 850
November: Auburn, Alabama, 994
Milwaukee, Wisconsin, 1004

MEMORANDA TO MEMBERS, 59, 345, 485, 600, 727, 862, 1027
Annual Salary Survey, 729
Change of Address, 730
Colloquium Lectures, 862
Contributing Members, 727
Corporate Members and Institutional Associates, 345
Final Report on 1971 Summer Research Institute on Partial Differential Equations, 862
Grants for Scientific Research, 728
Group Life Insurance Plan, 59
Mathematical Sciences Employment Register, 345, 485, 729, 863, 1027
Policy on Recruitment, 600
Reciprocity Agreement with Allahabad Mathematical Society, 59
Retired Mathematicians, 862
Ten-minute Contributed Papers, 485

NEW AMS PUBLICATIONS, 66, 347, 605, 739, 882, 1032


1271
PERSONAL ITEMS, 72, 331, 499, 601, 736, 879, 1036

RESERVATION FORMS, 304, 464, 688, 992, 1120

SALARY SURVEY, 867

SPECIAL MEETINGS INFORMATION CENTER, 322, 495, 595, 733, 872, 1029

SUMMER GRADUATE COURSES, 328, 494

SUMMER INSTITUTES, 57

TAX STATUS OF GRANTS, 1239

VISITING MATHEMATICIANS, 744

Supplementary list, 63, 884, 1035
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