NOTICES
OF THE
AMERICAN
MATHEMATICAL
SOCIETY

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ISSUE NO. 126
DECEMBER, 1970

SPECIAL ISSUE
ASSISTANTSHIPS AND FELLOWSHIPS
IN MATHEMATICS IN 1971-1972
NOTICES
OF THE
AMERICAN MATHEMATICAL SOCIETY

Edited by Everett Pitcher and Gordon L. Walker

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FOREWORD

The annual special issue of these Notices is published as a service to the mathematical community. This twelfth Special Issue contains a list of assistantships and fellowships available in mathematics and its related sciences for the academic year 1971-1972, a selected list of stipends, an article on the tax status of grants, and the index of all abstracts published in these Notices in 1970.

The list of assistantships and fellowships includes 433 departments of mathematics, statistics, computer science, and related mathematical disciplines, representing 330 colleges and universities. The American colleges and universities have been listed alphabetically within their states, with Canadian institutions listed at the end. The Society wishes to express its appreciation to the individuals associated with the institutions who have helped in assembling this information.
ASSISTANTSHIPS AND FELLOWSHIPS
IN MATHEMATICS IN 1971-1972

<table>
<thead>
<tr>
<th>TYPE of financial assistance (with number anticipated in 1971-1972)</th>
<th>STIPEND amount in dollars</th>
<th>TUITION if not included in stipend (dollars)</th>
<th>SERVICE REQUIRED hours per week type of service</th>
</tr>
</thead>
</table>

ALABAMA

Auburn University
AUBURN, ALABAMA 36830
L. P. Burton, Head
Department of Mathematics
Applications must be filed by February 10, 1971

NUMBER OF DEGREES AWARDED IN 1970
Baccalaureate degrees by institution 3077
Baccalaureate degrees by department 66
Master's degrees by department 12

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (2); geometry and topology (5); analysis and functional analysis (4); probability and statistics (1). TOTAL 12.

Fellowship and Traineeship (4) 2400-2800 12 150/qtr.
Teaching Assistantship (40) 2520-4800 9 150/qtr. 5-10 Teaching or equivalent

University of Alabama in Birmingham
BIRMINGHAM, ALABAMA 35233
Arthur C. Segal, Acting Chairman
Department of Mathematics
Applications must be filed by April 1, 1971

NUMBER OF DEGREES AWARDED IN 1970
Baccalaureate degrees by institution 300
Baccalaureate degrees by department 20

Teaching Assistantship (3) 2700-3150 9 450/yr. 5 Teaching

University of Alabama in Huntsville
HUNTSVILLE, ALABAMA 35807
James M. Horner, Chairman
Department of Mathematics
Applications must be filed by February 15, 1971

NUMBER OF DEGREES AWARDED IN 1970
Baccalaureate degrees by institution 135
Baccalaureate degrees by department 14
Master's degrees by department 8

Teaching Assistantship (8) 3000 9 5 Teaching

University of Alabama (Tuscaloosa)
UNIVERSITY, ALABAMA 35486
Robert L. Plunkett, Head
Department of Mathematics
Applications must be filed by February 15, 1971

NUMBER OF DEGREES AWARDED IN 1970
Baccalaureate degrees by institution 2352
Baccalaureate degrees by department 116
Master's degrees by department 21

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (3); geometry and topology (9); analysis and functional analysis (9); probability and statistics (1); applied mathematics (10). TOTAL 32.

Teaching Fellowship (4) 3625-4125 9 510 6 Teaching
Teaching Assistantship (25) 2425-3250 9 510 6 Teaching
Scholarship (4) 1925-1925 9 510
NSF Traineeship (3) 2400-2800 12
**TYPE** | **STIPEND** | **TUITION** | **SERVICE REQUIRED**
---|---|---|---
| of financial assistance (with number anticipated in 1971-1972) | amount in dollars | 9 or 12 mo. | if not included hours per week type of service |
---|---|---|---|---|---|
**ALASKA**

University of Alaska

**COLLEGE, ALASKA 99701**
Robert W. Brown, Head
Department of Mathematics

Applications must be filed by March 15, 1971

Teaching Assistantship (6) 3825-4050 9 300 6 Teaching

**ARIZONA**

Arizona State University

**TEMPE, ARIZONA 85281**
Nevin Savage, Chairman
Department of Mathematics

Applications must be filed by March 15, 1971

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (6); geometry and topology (7); logic (3); analysis and functional analysis (2); differential equations (2). TOTAL 19.

Fellowship (3) 2400-2800* 12
Teaching Assistantship (50) 2800-3500 9 160 6 Teaching
Scholarship (6) out of state fees

*Supplementary teaching may be available.

Northern Arizona University

**FLAGSTAFF, ARIZONA 86001**
Richard D. Meyer, Chairman
Department of Mathematics

Applications must be filed by April 15, 1971

Teaching Assistantship (6) 2250 9 152/sem. 12 Teaching, Tutoring

University of Arizona

**TUCSON, ARIZONA 85721**
M. S. Cheema, Acting Head
Department of Mathematics

Applications must be filed by March 15, 1971

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

Fellowship (4) 2000-3000 9
Teaching Assistantship (50) 3250-3750 9 160/sem. 6 Teaching
Research Assistantship (10) 3250-3750 9 160/sem. 6 Research
Scholarship (6) tuition

**ARKANSAS**

Arkansas State University

**STATE UNIVERSITY, ARKANSAS 72467**
J. L. Linnstaedter, Chairman
Division of Mathematics and Physics

Applications must be filed by March 15, 1971

Teaching Assistantship (6) 1800-2000 9 300
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:

- Approximation Theory
- Number Theory
- Algebra
- Fluid Mechanics
- Convexity
- Complex Manifolds
- Calculus of Variations
- Differential Geometry
- Elasticity
- Combinatorial Theory
- Statistics and Probability
- Functional Analysis
- Geometry of Numbers
- Topology
- Transform Analysis
- Relativity
- Quantum Mechanics
- Partial Differential Equations

Application for assistantships and fellowships should be made prior to March 15. Foreign students should apply as soon as possible. Applications for admission and financial support may be obtained by writing to:

Professor Hanno Rund, Head
Box N
Department of Mathematics
University of Arizona
Tucson, Arizona 85721
### University of Arkansas

FAYETTEVILLE, ARKANSAS 72701

James E. Scroggs, Chairman
Department of Mathematics and Statistics

Applications must be filed by February 15, 1971

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (2); geometry and topology (5); analysis and functional analysis (1). TOTAL 8.

<table>
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<td>Research Assistantship (1)</td>
<td>3600</td>
<td>300</td>
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*15 academic year; 30 summer.

### California Institute of Technology

PASADENA, CALIFORNIA 91109

W. A. J. Luxemburg, Executive Officer for Mathematics
Department of Mathematics

Applications must be filed by February 15, 1971

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (8); analysis and functional analysis (9); probability and statistics (1); computer science and numerical analysis (2). TOTAL 20.

<table>
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<td>Teaching Assistantship (12)</td>
<td>2600-3100</td>
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<tr>
<td>Research Assistantship (2)</td>
<td>3150-3670</td>
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<tr>
<td>Scholarship</td>
<td>2645</td>
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*15 academic year; 30 summer.

### THE CLAREMONT COLLEGES

Claremont Graduate School was awarded an N.S.F. Departmental Development Grant to develop a new Ph.D. program in mathematics. This grant makes possible a number of fellowships. C.G.S. 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
<table>
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<td></td>
<td>in dollars</td>
<td>12 mo.</td>
<td>in stipend (dollars)</td>
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</table>

California Institute of Technology

PASADENA, CALIFORNIA 91109
G. B. Whitham, Chairman
Applied Mathematics Committee
Applications must be filed by February 15, 1971

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

Fellowship (5) 2500-3000 9 payable
Teaching Assistantship (7) 2500-3000 9 * 4
Research Assistantship (2) 2500-3000 9 *

*Tuition Scholarship is usually awarded with Teaching Assistantship.

California State College at Fullerton

FULLERTON, CALIFORNIA 92831
Dennis B. Ames, Chairman
Department of Mathematics

Teaching Assistantship (2) 1800 9 payable 3 Teaching

California State College at Hayward

HAYWARD, CALIFORNIA 94542
Bruce E. Trumbo, Chairman
Department of Statistics
Applications must be filed by September 1, 1971

Assistantship (6) 1200-3000 9 variable 10-20

*Fees are $77 per semester plus non-resident 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 April 1, 1971

Teaching Assistantship (10) 1627-2987 9 * 4-7 units Teaching

California State College at Long Beach

LONG BEACH, CALIFORNIA 90801
Herbert L. Stone, Chairman
Department of Operations Research & Statistics

Teaching Assistantship (5) 800 6

Claremont Graduate School

CLAREMONT, CALIFORNIA 91711
Robert C. James, Chairman
Department of Mathematics
Applications must be filed by February 15, 1971

Fellowship (18) 2400-2800 12 Teaching
Teaching Fellowship (2) 2400-2800 12 Research
Research Assistantship (2) 2400

NUMBER OF DEGREES AWARDED IN 1970
Baccalaureate degrees by institution 155
Master's degrees by department 1

NUMBER OF DEGREES AWARDED IN 1970
Baccalaureate degrees by institution 1484
Baccalaureate degrees by department 16
Master's degrees by department 1

NUMBER OF DEGREES AWARDED IN 1970
Baccalaureate degrees by institution 4357
Baccalaureate degrees by department 120
Master's degrees by department 5

NUMBER OF DEGREES AWARDED IN 1970
Master's degrees by department 5

1103
TYPE STIPEND TUITION SERVICE REQUIRED
of financial assistance (with number anticipated in 1971-1972)

SACRAMENTO STATE COLLEGE

Sacramento State College
SACRAMENTO, CALIFORNIA 95819
John L. Wulff, Chairman
Department of Mathematics and Statistics
Applications must be filed by May 15, 1971

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<td>Teaching</td>
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<tr>
<td>Graduate Assistantship (8)</td>
<td>2300</td>
<td>10</td>
<td>Lab Assistant</td>
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San Diego State College

San Diego State College
SAN DIEGO, CALIFORNIA 92115
C. V. Holmes, Chairman
Department of Mathematics

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<td>Teaching Assistantship (30)</td>
<td>2960-3220</td>
<td>9</td>
<td>73.50/sem. Teaching</td>
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San Francisco State College

San Francisco State College
SAN FRANCISCO, CALIFORNIA 94132
Newman Fisher, Chairman
Department of Mathematics

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<th>Stipend</th>
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<tr>
<td>Fellowship</td>
<td>800-1600</td>
<td>9</td>
<td>5 Consultation</td>
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San Jose State College

San Jose State College
SAN JOSE, CALIFORNIA 95114
Gerald C. Preston, Chairman
Department of Mathematics
Applications must be filed by March 15, 1971

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<th>Type of Service</th>
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<td>Teaching Fellowship (12)</td>
<td>2200-2300</td>
<td>9</td>
<td>70 Teaching</td>
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Stanford University

Stanford University
STANFORD, CALIFORNIA 94305
Ralph Phillips, Chairman
Department of Mathematics
Applications must be filed by January 15, 1971

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<th>Type of Service</th>
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<tr>
<td>Fellowship (6)</td>
<td>2400-2800*</td>
<td>12</td>
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<tr>
<td>Graduate Assistantship** (40)</td>
<td>2400-2690***</td>
<td>9</td>
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Ph.D. degrees awarded during last three years by field of specialization: geometry and topology (5); logic (12); analysis and functional analysis (14); probability and statistics (6); applied mathematics (12); combinatorial analysis (1). TOTAL 50.

*In some cases Fellows serve as Course Assistants or Teaching Fellows for one quarter for an additional stipend of $840 - $1,000.

**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 $667 are available for study in the summer quarter.

****3 hrs./week teaching 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, 1971

Ph. D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (20). TOTAL 20.

Fellowship (5) 2400-2800 12
Teaching Fellowship (1) 3150 9
Teaching Assistantship (8) 2835-3060 9
Research Assistantship (40) 2835-3195 9

Stanford University

STANFORD, CALIFORNIA 94305

Gerald J. Lieberman, Chairman
Department of Operations Research

Applications must be filed by March 1, 1971

Ph. D. degrees awarded during last three years by field of specialization: operations research (24). TOTAL 24.

Fellowship (3) 2100 9
Research Assistantship (22) 2200 9
NDEA (4) 2800 12
NSF Traineeship (11) 2900 12

Stanford University

STANFORD, CALIFORNIA 94305

Rupert G. Miller, Jr., Chairman
Department of Statistics

Applications must be filed by January 15, 1971

Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (28). TOTAL 28.

Fellowship (15) 2400 9
Teaching Assistantship (6) 2400 9
Research Assistantship (6) 2400 9

University of California, Berkeley

BERKELEY, CALIFORNIA 94720

J. W. Addison, Jr., Chairman
Department of Mathematics

Applications must be filed by *

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (15); geometry and topology (35); logic (13); analysis and functional analysis and global analysis (47); computer science and numerical analysis (1); applied mathematics (15). TOTAL 126.

Fellowship (106) 1800-3000** 9 ***
Teaching Assistantship (67) 3447-4182 9 ***
Research Assistantship (27) 3660 9 ***
Community Teaching Fellowship (5) 3447 9 *** 16-20 Teaching minority groups

**Some fellowships carry additional dependency allowances.
***Fees, etc. per quarter: Registration fee, $100; Education fee, $120; Campus fee, $7.00; Foreign student health fee, $9.00; Non-resident tuition fee, $400. Many of the fellowships cover the non-resident and other fees in addition to the stipend quoted. Teaching and Research Assistants may apply for a non-resident fee waiver, 75 of which are available.
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<th>TYPE</th>
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<td>in dollars</td>
<td>9 or 12 mo. in stipend (dollars)</td>
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### University of California, Berkeley

**BERKELEY, CALIFORNIA 94720**

- Beresford N. Parlett, Chairman  
- Department of Computer Science

Applications must be filed by April 1971

Ph.D. degrees awarded during last three years by field of specialization: precedence process for programming languages (1). TOTAL 1.

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<th>TYPE</th>
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| Teaching Assistantship (4) | 383/mo. | 175/qtr. | 20 |
| Research Assistantship (10)| 305/mo. | 175/qtr. | 20 |

### University of California, Berkeley

**BERKELEY, CALIFORNIA 94720**

- E. L. Scott, Chairman  
- Department of Statistics

Applications must be filed by

Ph.D. degrees awarded during last three years by field of specialization: probability and statistics (29); biostatistics (4). TOTAL 33.

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| Fellowship (10)            | 2400-3600 | 9 & 12 | Teaching and Research |
| Teaching and Research      |          |        |                  |
| Assistantship (36)         | 3096     | 9      | 20 Teaching and Research |
| Summer Research Assistantship | 610/mo. | 2 1/2 |                  |


**College of Letters and Science only.

**None for residents; non-residents $1200, unless waiver granted.

### University of California, Davis

**DAVIS, CALIFORNIA 95616**

- Kurt Kreith, Chairman  
- Department of Mathematics

Applications must be filed by *

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 (2); probability and statistics (3). TOTAL 11.

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<th>TYPE</th>
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| Fellowship (3)             | 2000-2400 | 12 | variable |
| Teaching Fellowship (5)    | 3447     | 9  | 16 |
| Teaching Assistantship (26)| 3447     | 9  | 16 |
| Scholarship (1)            | 2000-2400 | 12 | *** |

*Scholarship and Fellowships - February 1, 1971; Assistantships - February 15, 1971.

**$400 per qtr. non-resident; resident incidental fee $167 - sometimes waived.

### University of California, Irvine

**IRVINE, CALIFORNIA 92664**

- Ray A. Kunze, Chairman  
- Department of Mathematics

Applications must be filed by April 15, 1971

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

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| Fellowship (3)             | 2400-2800* | 12 | variable |
| Teaching Fellowship (3)    | 3447-3501 | 9 | 20 |
| Teaching Assistantship (17)| 3447-3501 | 9 | 20 |
| Research Assistantship (5) | 2746-2790 | 9 | 20 |

*Minimum/maximum plus $500 each dependent.

**$400 per qtr. non-resident; resident incidental fee $167 - sometimes waived.
University of California, Irvine

IRVINE, CALIFORNIA 92664
Fred M. Tonge, Chairman
Department of Information and Computer Science

Applications must be filed by March 30, 1971

Fellowship - NSF (2) 2000 9 1200 non-res.
Teaching Assistantship (8) 3447 9 1200 non-res. 20 Teaching
Hughes (1) 2900 9 1200 non-res.

University of California, Los Angeles

LOS ANGELES, CALIFORNIA 90024
Earl A. Coddington, Chairman
Department of Mathematics

Applications must be filed by January 31, 1971

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (6); geometry and topology (8); logic (6); analysis and functional analysis (13); probability and statistics (5); computer science and numerical analysis (11); applied mathematics (4); Riemann surfaces (4); convexity (4); partial differential equations (1); ordinary differential equations (1). TOTAL 65.

Fellowship (15) 1800-2400 9/12 400/qtr. non-res.
Teaching Fellowship (4) 3447-4152 9 400/qtr. non-res.
Teaching Assistantship (43) 3447-4152 9 400/qtr. non-res. 20 Teaching
Research Assistantship (10) 4050-4476**

*38 M.A., 3 M.A. T.
**Usually awarded to advanced graduate students.

University of California, Riverside

RIVERSIDE, CALIFORNIA 92502
John E. de Pillis, Chairman
Department of Mathematics

Applications must be filed by February 1, 1971

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (4); geometry and topology (3); analysis and functional analysis (5); probability and statistics (4); computer science and numerical analysis (1); constructive mathematics (2). TOTAL 10.

Fellowship (8) 2200-varies 9 6 Teaching
Teaching Fellowship (5) 3447(only) 9 6 Teaching
Teaching Assistantship (15) 3447(only) 9 6 Teaching

University of California, San Diego

LA JOLLA, CALIFORNIA 92037
Helmut Rohr, Chairman
Department of Mathematics

Applications must be filed by February 1, 1971

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (1); analysis and functional analysis (5); probability and statistics (1); computer science and numerical analysis (1); constructive mathematics (2). TOTAL 10.

Fellowship (14) 2940 12 * 1/2 time Teaching
Teaching Assistantship (43) 3619 9 * 1/2 time Teaching
Research Assistantship (5) 3843 11 * 1/2 time
Scholarship (1) 12

*All graduate students (resident and non-resident) pay per quarter: $226 (Registration Fee $100; Educational Fee $120; Student Center Fee $6). Non-resident graduate students pay per quarter: $400 Tuition in addition to the above $226.
University of California, Santa Barbara

SANTA BARBARA, CALIFORNIA 93106
David L. Outcalt, Chairman
Department of Mathematics
Applications must be filed by March 1, 1971

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (8); geometry and topology (1); analysis and functional analysis (6); graph theory (2). TOTAL 17.

<table>
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<td>hours per week</td>
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<td>in dollars</td>
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</table>

*Winter and Spring 1970.
**$1200 for out-of-state students.

University of California, Santa Cruz

SANTA CRUZ, CALIFORNIA 95060
Harold Widom, Chairman
Department of Mathematics
Applications must be filed by February 1, 1971

Ph. D. degrees awarded during last three years by field of specialization: geometry and topology (8); analysis and functional analysis (4); probability and statistics (2); computer science and numerical analysis (1); applied mathematics (1). TOTAL 16.

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<td>Teaching/Research Assistantship (8)</td>
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University of Southern California

LOS ANGELES, CALIFORNIA 90007
H. A. Antosiewicz, Chairman
Department of Mathematics
Applications must be filed by March 1, 1971

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

<table>
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Colorado State University

FORT COLLINS, COLORADO 80521
E. R. Deal, Chairman
Mathematics Section
Applications must be filed by March 15, 1971

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (2); analysis and functional analysis (2); applied mathematics (1). TOTAL 5.
Colorado State University

FORT COLLINS, COLORADO 80521
Franklin A. Graybill, Chairman
Department of Statistics

Applications must be filed by March 15, 1971

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

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University of Colorado

BOULDER, COLORADO 80302
Albert Lundell, Chairman
Department of Mathematics

Applications must be filed by February 1, 1971

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (7); geometry and topology (2); logic (2); analysis and functional analysis (8); computer science and numerical analysis (1); applied mathematics (7). TOTAL 27.

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*Plus $400 for summer.

University of Colorado

BOULDER, COLORADO 80302
Lloyd D. Fosdick, Chairman
Department of Computer Science

Applications must be filed by February 1, 1971

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University of Denver

DENVER, COLORADO 80210
H. J. Greenberg, Chairman
Department of Mathematics

Applications must be filed by March 1, 1971

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

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<td>Master's degrees by department</td>
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</tr>
</tbody>
</table>

*Late applicants are considered.

**Tuition, room and board, small stipend.

---

**UNIVERSITY OF DENVER, DEPARTMENT OF MATHEMATICS**

WHERE SHOULD YOU GO TO GET A PH. D. IN MATHEMATICS?

1. Go where there is mathematical breadth and option. Will you have a real choice? Your career and your job will probably require you to have a broad knowledge of mathematics and its applications including computers.

2. Go where the attitude is in tune with the times. Mathematics can serve society as well as being self-serving.

3. Go where there is an active research program that can include you and will honestly interest you. Check the number of research assistantships, the faculty to graduate student ratio, and the kind of research being done.

4. Go where the curriculum, degree programs and requirements reflect the changing nature of undergraduate education.

5. Go where you would like to live for the next four years.

We think you will think highly of us. We have an excellent young department in an excellent location. For information write to:

Herbert J. Greenberg, Chairman
Department of Mathematics
University of Denver
Denver, Colorado 80210

---

1110
University of Connecticut

STORRS, CONNECTICUT 06268
Elliot S. Wolk, Head
Department of Mathematics
Applications must be filed by April 1, 1971

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

Fellowship (4) 2400-3000 9 290* 3 Teaching
Teaching Fellowship (8) 3105-3975 9 290* 4-6 Teaching
Research Assistantship (18) 3105-3975 9 290* varies Research
Scholarship (2) 750-1000 9 290*

*Plus $300 out-of-state fee.

University of Connecticut

STORRS, CONNECTICUT 06268
Gottfried E. Noether, Head
Department of Statistics
Applications must be filed by March 1, 1971

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

Fellowship (5) 2000-3600 variable 290* 5 Discussion
Teaching Fellowship (4) 2700-3130 9 290* 10 Discussion
Research Assistantship (1) 2910-3750 9 290*

*Plus $300 for out-of-state.

Wesleyan University

MIDDLETOWN, CONNECTICUT 06457
Walter Gottschalk, Chairman
Department of Mathematics
Applications must be filed by March 15, 1971*

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 (1). TOTAL 7.

Fellowship (3) 2450-2800** 9 5 Quiz section
Teaching Assistantship (12) 2450-2800** 9 5 and/or
Research Assistantship (3) 2450-2800** 9 5 Papergrading

*Late applications will be considered.
**Dependency allowances, and summer stipends, are frequently available upon request.
### Yale University

**NEW HAVEN, CONNECTICUT 06520**

W. S. Massey, Chairman  
Department of Mathematics

Applications must be filed by January 20, 1971

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (12); geometry and topology (6); analysis and functional analysis (12). TOTAL 30.

<table>
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<td>1800–1800*</td>
<td>2400–2400</td>
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<td>1800–2100*</td>
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*3rd and 4th year students may earn $600–$1000 additional for teaching.

### Yale University

**NEW HAVEN, CONNECTICUT 06520**

Leonard J. Savage, Chairman  
Department of Statistics

Applications must be filed by January 20, 1971

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

<table>
<thead>
<tr>
<th>Type of Assistance</th>
<th>Stipend (dollars)</th>
<th>Tuition (dollars)</th>
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<td>Fellowship (15)</td>
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### Delaware

**NEWARK, DELAWARE 19711**

Willard E. Baxter, Chairman  
Department of Mathematics

Applications must be filed by March 1, 1971

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

<table>
<thead>
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<th>Type of Assistance</th>
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<td>Research Assistantship (2)</td>
<td>3200</td>
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<td>University Fellowship (1)</td>
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### University of Delaware

**NEWARK, DELAWARE 19711**

David E. Lamb, Chairman  
Department of Statistics and Computer Science

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

<table>
<thead>
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<th>Type of Assistance</th>
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<td>Research Assistantship (8)</td>
<td>5000</td>
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</table>
### 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, 1971

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

<table>
<thead>
<tr>
<th>Type of Financial Assistance (with number anticipated in 1971-1972)</th>
<th>Stipend Amount in Dollars</th>
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</table>

#### Catholic University of America

**WASHINGTON, D. C. 20017**

Gustav B. Hensel, Chairman  
Department of Mathematics  
*Including the Statistical Laboratory.*

Applications must be filed by February 15, 1971

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 (5); computer science and numerical analysis (1). TOTAL 18.

<table>
<thead>
<tr>
<th>Type of Financial Assistance (with number anticipated in 1971-1972)</th>
<th>Stipend Amount in Dollars</th>
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#### Georgetown University

**WASHINGTON, D. C. 20007**

Geraldo S. S. Avila, Chairman  
Department of Mathematics

Applications must be filed by February 15, 1971

Ph. D. degrees awarded during last three years by field of specialization: analysis and functional analysis (9). TOTAL 9.

<table>
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<th>Type of Financial Assistance (with number anticipated in 1971-1972)</th>
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<th>Tuition If Not Included in Stipend (Dollars)</th>
<th>Service Required Hours Per Week Type of Service</th>
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#### George Washington University

**WASHINGTON, D. C. 20006**

Hewitt Kenyon, Chairman  
Department of Mathematics

Applications must be filed by February 15, 1971

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

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<thead>
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<th>Type of Financial Assistance (with number anticipated in 1971-1972)</th>
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*Plus dependency allowance.*
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<td>Horace Komm, Chairman</td>
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<tr>
<td>John Markham Freeman, Chairman</td>
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<td>D. R. Clutterham, Head</td>
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<td>TALLAHASSEE, FLORIDA 32306</td>
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<tr>
<td>O. G. Harrold, Chairman</td>
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<td>TALLAHASSEE, FLORIDA 32306</td>
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| *For computer science majors or for majors from other mathematical sciences for duties in the computer center.
Florida State University

TALLAHASSEE, FLORIDA 32306
Ralph A. Bradley, Head
Department of Statistics
Applications must be filed by February 1, 1971

Ph.D. degrees awarded during last three years by field of specialization: probability and statistics (18*). TOTAL 18.

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<td>3600-4200</td>
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*December 1970 graduates yet to complete requirements are not included.
**Some fellowships and traineeships have additional dependents' allowances.

University of Florida

GAINESVILLE, FLORIDA 32601
A. R. Bednarek, Chairman
Department of Mathematics
Applications must be filed by February 15, 1971

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

<table>
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<td>15-20 Research</td>
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University of Florida

GAINESVILLE, FLORIDA 32601
W. Mendenhall, Chairman
Department of Statistics
Applications must be filed by March 1, 1971*

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

<table>
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<th>Type</th>
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University of Miami

CORAL GABLES, FLORIDA 33124
David Hertzig, Chairman
Department of Mathematics
Applications must be filed by March 1, 1971*

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (5); geometry and topology (4); analysis and functional analysis (2). TOTAL 11.

<table>
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<td>Research</td>
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*Acceptable at any time.
University of South Florida

TAMPA, FLORIDA 33620
Jogindar S. Ratti, Chairman
Department of Mathematics
Applications must be filed by April 15, 1971*

Fellowship (4) 2700 9 175/qtr. 6
Teaching Assistantship (16) 2700 9 175/qtr. 6

*Late applications considered.

GEORGIA

Emory University

ATLANTA, GEORGIA 30322
Trevor Evans, Chairman
Department of Mathematics
Applications must be filed by April 15, 1971

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 (13) 2000–2500 9 or 12
Teaching Fellowship (15) 2150–4500 9 4–8 Teaching

Emory University

ATLANTA, GEORGIA 30322
Elmer C. Hall, Chairman
Department of Statistics and Biometry
Applications must be filed by February 15, 1971

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

Fellowship (8) 2400–2800 12

Georgia Institute of Technology

ATLANTA, GEORGIA 30332
John D. Neff, Acting Director
School of Mathematics
Applications must be filed by March 1, 1971

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); applied mathematics (2). TOTAL 8.

Teaching Assistantship (25) 2250–4800 9 405 5–10 Teaching
NSF Traineeship (3)
Georgia Institute of Technology

ATLANTA, GEORGIA 30332

Vladimir Slamecka, Director
School of Information and Computer Science

Applications must be filed by April 1, 1971

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

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*Appointments normally made on a one-third time basis.

Georgia Southern College

STATESBORO, GEORGIA 30458

D. Earl Lavender, Head
Department of Mathematics

Applications must be filed by April 1, 1971

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Georgia State University

ATLANTA, GEORGIA 30303

Jan List Boal, Chairman
Department of Mathematics

Applications must be filed by May 15, 1971

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University of Georgia

ATHENS, GEORGIA 30601

J. G. Horne, Head
Department of Mathematics

Applications must be filed by February 15, 1971

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 (4); other (2). TOTAL 14.

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<tr>
<td>Carl F. Kossack, Head Department of Statistics</td>
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<td>D. L. Duncan, Head Department of Mathematics</td>
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<tr>
<td>H. S. Bear, Chairman Department of Mathematics</td>
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<td>Richard H. Jones, Chairman Department of Information Sciences</td>
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IDAHO

Idaho State University

POCATELLO, IDAHO 83201
John Hilzman, Chairman
Department of Mathematics
Applications must be filed by March 15, 1971

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*Plus dependency allowance.

University of Idaho

MOSCOW, IDAHO 83843
Howard E. Campbell, Chairman
Department of Mathematics
Applications must be filed by February 15, 1971

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

<table>
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PH. D. PROGRAM AT HAWAII

The University of Hawaii Mathematics Department has a young and active faculty of forty-one 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.

For detailed information write to:

H. S. Bear, Chairman
Department of Mathematics
University of Hawaii
Honolulu, Hawaii 96822
Bradley University

PEORIA, ILLINOIS 61606
Nelson A. Brigham, Chairman
Department of Mathematics
Applications must be filed by March 1, 1971

Teaching Assistantship (2) 2100 9 6 Teaching

Bradley University

PEORIA, ILLINOIS 61606
H. A. Morris, Chairman
Department of Computer Science
Applications must be filed by March 1, 1971

Research Assistantship (4) 2100 9 18

DePaul University

CHICAGO, ILLINOIS 60614
Michael Wichman, Acting Chairman
Department of Mathematics
Applications must be filed by June 1, 1971

Teaching Assistantship (4) 2200-2200 9 10 Tutoring

Eastern Illinois University

CHARLESTON, ILLINOIS 61920
A. J. DiPietro, Head
Department of Mathematics
Applications must be filed by March 15, 1971

Fellowship (3) 1400 9 4-8 Teaching
Faculty Assistantship (10) 2430-4320 9 12 Miscellaneous
Graduate Assistantship (4) 3100 12 12 Miscellaneous

Illinois Institute of Technology

CHICAGO, ILLINOIS 60616
Haim Reingold, Chairman
Department of Mathematics
Applications must be filed by March 1, 1971

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (6); geometry and topology (3); analysis and functional analysis (7); probability and statistics (2); applied mathematics (4). TOTAL 22.

Fellowship (10) 2400-3600 12 6
Teaching Assistantship (35) 2100-2700 9
Illinois Institute of Technology

CHICAGO, ILLINOIS 60616
Peter G. Lykos, Acting Chairman
Information Science Center
Applications must be filed by April 15, 1971

Fellowship (2) 2400-3200 12
Teaching Assistantship (15) 2500-2500 9

Illinois State University

NORMAL, ILLINOIS 61761
Clyde T. McCormick, Head
Department of Mathematics
Applications must be filed by March 1, 1971*

Teaching Fellowship (4) 3780 9 6-7 Teaching
Teaching Assistantship (25) 2160-3240 9 10-12 Teaching or assisting

*Late applicants will be considered for 1971-72 vacancies occurring after May 1.

Loyola University

CHICAGO, ILLINOIS 60626
J. R. VandeVelde, Chairman
Department of Mathematics
Applications must be filed by August 1, 1971

Teaching Assistantship (4) 2000-2400 9 540/sem. 6

Northeastern Illinois State College

CHICAGO, ILLINOIS 60625
Louis M. Weiner, Chairman
Department of Mathematics
Applications must be filed by March 15, 1971

Graduate Assistantship (1) 4200 12 270 for 15 Tutoring residents of state

Northern Illinois University

DEKALB, ILLINOIS 60115
Donald R. Ostberg, Chairman
Department of Mathematics
Applications must be filed by*

Teaching Assistantship (45) 2340-2880 9 9
Summer Assistantship (20) 520 2 6

*May 1 for Summer; July 1 for Fall Semester.
Northwestern University

EVANSTON, ILLINOIS 60201
R. P. Boas, Chairman
Department of Mathematics

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (9);
geometry and topology (7); analysis and functional analysis (8); probability and statistics (3); applied ma-
thematics (1). TOTAL 28.

Fellowship (12) 2400-2800 12 630/qtr. 12
Teaching Fellowship (4) 2300 9 630/qtr. 12
Teaching Assistantship (30) 2300 9 630/qtr. 12
Research Assistantship (8) 2840-4190 9 12

Northwestern University

EVANSTON, ILLINOIS 60201
A. Wouk, Chairman
Committee on Applied Mathematics

Applications must be filed by February 15, 1971

Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (2);
computer science and numerical analysis (4); applied mathematics (8). TOTAL 14.

Fellowship (10) 2000-2800 9-12 variable
Teaching Fellowship (3) 2500-2700 9 variable
Research Assistantship (7) 4230-6000 9-12 1890 variable
Scholarship (2)

Southern Illinois University

CARBONDALE, ILLINOIS 62901
Carl E. Langenhop, Chairman
Department of Mathematics

Applications must be filed by February 1, 1971

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

Fellowship (5) 2295 9 5-25 fees 5-25 fees 6 Teaching
Teaching Assistantship (45) 2655-3150 9 6 Teaching

Southern Illinois University - Edwardsville

EDWARDSVILLE, ILLINOIS 62025
R. N. Pendergrass, Chairman
Faculty of Mathematical Studies

Applications must be filed by February 15, 1971

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (13);
baccalaureate degrees by department 61
Master's degrees by department 7

Fellowship (2) 1900-2400 9-12 4-8 Teaching
Teaching Assistantship (24) 2700-3150 9 16-20 Research
Research Assistantship (2) 2250-2700 9
Scholarship (4) Tuition and fees
University of Chicago

CHICAGO, ILLINOIS 60637
Alberto P. Calderon, Chairman
Department of Mathematics
Applications must be filed by *

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (27); geometry and topology (11); analysis and functional analysis (13); applied mathematics (2). TOTAL 53.

- Fellowship (30) 1800 9 or 12
- Teaching Assistantship (12) 2400 9 or 12
- Research Assistantship (21) 2400 9 or 12

*January 1, 1971 - Foreign; February 1, 1971 - American and Canadian.

University of Chicago

CHICAGO, ILLINOIS 60637
Robert L. Ashenhurst, Chairman
Department of Information Sciences
Applications must be filed by January 1, 1971

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

- Fellowship (2) 2600 either
- Teaching Assistantship (5) 2700 9
- Research Assistantship (8) 2700 9
- Scholarship (2) 2475 9

University of Chicago

CHICAGO, ILLINOIS 60637
Jack D. Cowan, Chairman
Department of Mathematical Biology
Applications must be filed by *

Ph. D. degrees awarded during last three years by field of specialization: mathematical biology (4). TOTAL 4.

- Graduate Student Fellowship (20) 2300 12
- Postdoctoral Fellowship (9) 6000-7000 12

*January 1, 1971 - Foreign Students; February 1, 1971 - U.S. Citizens.

University of Chicago

CHICAGO, ILLINOIS 60637
Paul Meier, Acting Chairman
Department of Statistics
Applications must be filed by January 1, 1971

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

- Fellowship (9) 1800-3000 9
- Teaching Assistantship (5) 1800-2900 9
- Research Assistantship (5) 1800-2900 9

1123
University of Illinois

CHAMPAIGN-URBANA, ILLINOIS 61801

Paul T. Bateman, Head
Department of Mathematics
Applications must be filed by February 15, 1971

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (18); geometry and topology (12); logic (8); analysis and functional analysis (24); probability and statistics (8); computer science and numerical analysis (1); applied mathematics (11); combinatorics (1). TOTAL 83.

<table>
<thead>
<tr>
<th>TYPE of financial assistance (with number anticipated in 1971-1972)</th>
<th>STIPEND amount in dollars</th>
<th>9 or 12 mo.</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>
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<td>Tuition Waiver (5)</td>
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University of Illinois at Chicago Circle

CHICAGO, ILLINOIS 60680

Joseph Landin, Head
Department of Mathematics
Applications must be filed by *

*February 1, 1971 -- Fellowships; September 1, 1971 -- Assistantships.

Western Illinois University

MACOMB, ILLINOIS 61455

A. Jerry Shryock, Chairman
Department of Mathematics
Applications must be filed by March 1, 1971

Teaching Assistantship (10) | 270/mo. | 9 | 6 | Teaching |

Ball State University

MUNCIE, INDIANA 47306

John H. Hoelzer, Chairman
Department of Mathematical Sciences
Applications must be filed by March 15, 1971

Teaching Internship (15) | 2600-3600 | 9 | 340/yr. | 15-20 | Teaching |

INDIANA

NUMBER OF DEGREES AWARDED IN 1970

- Baccalaureate degrees by institution
- Baccalaureate degrees by department
- Master's degrees by department
<table>
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<tr>
<th>TYPE</th>
<th>STIPEND</th>
<th>TUITION</th>
<th>SERVICE REQUIRED</th>
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<td>if not included</td>
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<tr>
<td>number anticipated in 1971-1972</td>
<td>in dollars</td>
<td>in stipend (dollars)</td>
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**Indiana University**

BLOOMINGTON, INDIANA 47401

George Springer, Chairman

Department of Mathematics

Applications must be filed by February 1, 1971

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 (1); applied mathematics (1). **TOTAL 16.**

<table>
<thead>
<tr>
<th>Fellowship (25)</th>
<th>2000–3200</th>
<th>9 &amp; 12</th>
<th>*</th>
<th>Teaching</th>
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<tr>
<td>Teaching Fellowship (10)</td>
<td>3000–3600</td>
<td>9 &amp; 12</td>
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<td>3</td>
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<tr>
<td>Teaching Assistantship (140)</td>
<td>2700–3600</td>
<td>9 &amp; 12</td>
<td>75/sem.</td>
<td>5–6</td>
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<tr>
<td>Research Assistantship (10)</td>
<td>2900–3600</td>
<td>9 &amp; 12</td>
<td>75/sem.</td>
<td>15</td>
</tr>
<tr>
<td>Summer Fellowship (20)</td>
<td>600</td>
<td>8wks.</td>
<td>**</td>
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</tr>
<tr>
<td>Part-time Assistantship (10)</td>
<td>600–1800</td>
<td>varies</td>
<td>75/sem.</td>
<td>varies</td>
</tr>
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</table>

*Many provide exemption from all fees; others $73/sem. for usual course load.  
**Participation in a seminar the purpose of which is to provide insight into the learning and teaching of undergraduate mathematics.

**Purdue University**

LAFAYETTE, INDIANA 47907

M. Jerison, Head

Department of Mathematics

Applications must be filed by *

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (11); geometry and topology (2); logic (3); analysis and functional analysis (14); probability and statistics (1); applied mathematics (1). **TOTAL 42.**

<table>
<thead>
<tr>
<th>Fellowship (10)</th>
<th>1800–4000</th>
<th>9 &amp; 12</th>
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<th>Teaching</th>
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<tbody>
<tr>
<td>Teaching Assistantship (120)</td>
<td>2800–3500</td>
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<td>120</td>
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<tr>
<td>Research Assistantship (10)</td>
<td>2200–3500</td>
<td>9</td>
<td>120</td>
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</table>

*February 1, 1971 -- Fellowships; March 15, 1971 -- Assistantships

**Purdue University**

LAFAYETTE, INDIANA 47907

S. D. Conte, Head

Department of Computer Science

Applications must be filed by *

Ph. D. degrees awarded during last three years by field of specialization: logic (1); computer science and numerical analysis (14). **TOTAL 15.**

<table>
<thead>
<tr>
<th>Fellowship (5)</th>
<th>2400–2800</th>
<th>either</th>
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<tr>
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<td>2800–3600</td>
<td>10</td>
<td>60/sem.</td>
<td>10–15</td>
</tr>
<tr>
<td>Research Assistantship (20)</td>
<td>2800–3600</td>
<td>10</td>
<td>60/sem.</td>
<td>10–15</td>
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<td>Black Fellowship (2)</td>
<td>3600–4200</td>
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<tr>
<td>Purdue Fellowship (2)</td>
<td>3400–4000</td>
<td>either</td>
<td></td>
<td></td>
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</table>

*February 1, 1971 -- Fellowships; March 1, 1971 -- Assistantships.
Purdue University

LAFAYETTE, INDIANA 47907
Shanti S. Gupta, Head
Department of Statistics

Applications must be filed by February 15, 1971

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

<table>
<thead>
<tr>
<th>TYPE of financial assistance (with number anticipated in 1971-1972)</th>
<th>STIPEND amount in dollars</th>
<th>9 or 12 mo.</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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</thead>
<tbody>
<tr>
<td>Fellowship (6)</td>
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<td>12</td>
<td>0 or 120</td>
<td>Teaching</td>
<td></td>
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<tr>
<td>Teaching Assistantship (25)</td>
<td>2800-3500</td>
<td>10</td>
<td>120</td>
<td>20</td>
<td>Teaching</td>
</tr>
<tr>
<td>Research Assistantship (6)</td>
<td>2500-3500</td>
<td>10</td>
<td>120</td>
<td>20</td>
<td>Research</td>
</tr>
</tbody>
</table>

Purdue University, Calumet Campus

HAMMOND, INDIANA 46323
Robert D. Bechtel, Acting Chairman
Division of Mathematical Sciences

Applications must be filed by February 20, 1971

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (19); geometry and topology (6); logic (5); analysis and functional analysis (3); computer science and numerical analysis (1). TOTAL 34.

<table>
<thead>
<tr>
<th>TYPE of financial assistance (with number anticipated in 1971-1972)</th>
<th>STIPEND amount in dollars</th>
<th>9 or 12 mo.</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 (3)</td>
<td>3360</td>
<td>12</td>
<td>2</td>
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<tr>
<td>Teaching Assistantship (36)</td>
<td>2400-3000</td>
<td>9</td>
<td>4</td>
<td>0-6</td>
<td>Teaching</td>
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<tr>
<td>NSF(T)<em>, NDEA</em> (8)</td>
<td>2400-2800</td>
<td>12</td>
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<tr>
<td>Summer Support (30)</td>
<td>600</td>
<td>2</td>
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*These may be supplemented with half-time Teaching Assistantships--additional stipend $1000.

University of Notre Dame

NOTRE DAME, INDIANA 46556
O. Timothy O’Meara, Chairman
Department of Mathematics

Applications must be filed by February 20, 1971

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (19); geometry and topology (6); logic (5); analysis and functional analysis (3); computer science and numerical analysis (1). TOTAL 34.

<table>
<thead>
<tr>
<th>TYPE of financial assistance (with number anticipated in 1971-1972)</th>
<th>STIPEND amount in dollars</th>
<th>9 or 12 mo.</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 (6)</td>
<td>2400-2800</td>
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<td>120/qtr.</td>
<td>6</td>
<td>Teaching</td>
</tr>
<tr>
<td>Teaching Assistantship (60)</td>
<td>2700-3150</td>
<td>9</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Research Assistantship (3)</td>
<td>2700-3300</td>
<td>9 - 12</td>
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</tbody>
</table>

IOWA

Iowa State University

AMES, IOWA 50010
Wilfred E. Barnes, Head
Department of Mathematics

Applications must be filed by March 1, 1971

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (5); geometry and topology (2); logic (2); analysis and functional analysis (7); computer science and numerical analysis (7); differential equations (3). TOTAL 26.

<table>
<thead>
<tr>
<th>TYPE of financial assistance (with number anticipated in 1971-1972)</th>
<th>STIPEND amount in dollars</th>
<th>9 or 12 mo.</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>Fellowship (6)</td>
<td>2400-2800</td>
<td>9</td>
<td>120/qtr.</td>
<td>6</td>
<td>Teaching</td>
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</table>
Iowa State University

AMES, IOWA 50010
Robert M. Stewart, Chairman
Department of Computer Science
Applications must be filed by December 31, 1970
Ph. D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (10). TOTAL 10.

<table>
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<tbody>
<tr>
<td>Fellowship (4)</td>
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<td>120/qtr. 3 - 6</td>
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<tr>
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<td>2800-4000</td>
<td>11</td>
<td>120/qtr. 20</td>
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<tr>
<td>Research Assistantship (20)</td>
<td>2800-4000</td>
<td>11</td>
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</table>

University of Iowa

IOWA CITY, IOWA 52240
Richard R. Goldberg, Chairman
Department of Mathematics
Applications must be filed by February 15, 1971
Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (17); geometry and topology (4); analysis and functional analysis (6); mathematics education (1). TOTAL 28.

<table>
<thead>
<tr>
<th>TYPE</th>
<th>STIPEND</th>
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<tbody>
<tr>
<td>Fellowship (7)</td>
<td>2400-3000</td>
<td>9 &amp; 12</td>
<td>Teaching &amp; Research</td>
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<tr>
<td>Teaching Fellowship (6)</td>
<td>3600</td>
<td>12</td>
<td>Teaching</td>
</tr>
<tr>
<td>Teaching Assistantship (50)</td>
<td>3850-3950</td>
<td>9</td>
<td>710</td>
</tr>
<tr>
<td>Research Assistantship (6)</td>
<td>3850-3950</td>
<td>9</td>
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<tr>
<td>Scholarship (23)</td>
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</tr>
</tbody>
</table>

*Joint with Statistics and Computer Science.

University of Iowa

IOWA CITY, IOWA 52240
Gerard P. Weeg, Chairman
Department of Computer Science
Applications must be filed by February 15, 1971
Ph. D. degrees awarded during last three years by field of specialization: computer science (4). TOTAL 4.

<table>
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<tr>
<th>TYPE</th>
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<tbody>
<tr>
<td>Fellowship (3)</td>
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<td>Teaching</td>
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<tr>
<td>Teaching Fellowship (3)</td>
<td>3600</td>
<td>12</td>
<td>Teaching</td>
</tr>
<tr>
<td>Teaching Assistantship (10)</td>
<td>3200-3500</td>
<td>9</td>
<td>355** 20</td>
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<td>355** 20</td>
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<td>Scholarship (3)</td>
<td>partial tuition</td>
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*Joint with Mathematics and Statistics.
**Resident rates at $355 (no out-of-state fees).
University of Iowa

IOWA CITY, IOWA 52240

Robert V. Hogg, Chairman
Department of Statistics

Applications must be filed by February 15, 1971

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

TOTAL 8.

<table>
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<td>if not included in stipend (dollars)</td>
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<td>9 &amp; 12</td>
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<td>Teaching Fellowship (4)</td>
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<td>Teaching Assistantship (10)</td>
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<td>710</td>
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<td>Research Assistantship (6)</td>
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</table>

*Joint with Mathematics and Computer Science.

University of Northern Iowa

CEDAR FALLS, IOWA 50613

E. W. Hamilton, Head
Department of Mathematics

Applications must be filed by March 1, 1971

KANSAS

Fort Hays Kansas State College

HAYS, KANSAS 67601

W. Toalson, Chairman
Department of Mathematics

Applications must be filed by March 1, 1971

<table>
<thead>
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<th>TYPE</th>
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Kansas State College of Pittsburg

PITTSBURG, KANSAS 66762

Helen F. Kriegsman, Chairman
Department of Mathematics

Applications must be filed by March 1, 1971

<table>
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<tr>
<th>TYPE</th>
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<td></td>
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<td>1800-1935</td>
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<td>6</td>
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Kansas State University

MANHATTAN, KANSAS 66502

John E. Maxfield, Head
Department of Mathematics

Applications must be filed by February 15, 1971*

<table>
<thead>
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<th>TYPE</th>
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<td>9</td>
<td>158</td>
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*For fellowships.
Kansas State University

MANHATTAN, KANSAS 66502
H. C. Fryer, Head
Department of Statistics & Computer Science
Applications must be filed by February 1, 1971

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

<table>
<thead>
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<th>TYPE</th>
<th>STIPEND</th>
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<td>Teaching 2 classes during 4 years</td>
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<td>15-18 Teaching</td>
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<td>research assistantship</td>
<td>3000-3780</td>
<td>12</td>
<td>18 Research</td>
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University of Kansas

LAWRENCE, KANSAS 66044
Paul S. Mostert, Chairman
Department of Mathematics
Applications must be filed by February 1, 1971

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (10); geometry and topology (4); analysis and functional analysis (4). TOTAL 18.

<table>
<thead>
<tr>
<th>TYPE</th>
<th>STIPEND</th>
<th>TUITION</th>
<th>SERVICE REQUIRED</th>
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<tr>
<td>fellowship</td>
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<td>Teaching</td>
</tr>
<tr>
<td>teaching fellowship</td>
<td>2600-3200</td>
<td>9</td>
<td>3 Teaching</td>
</tr>
<tr>
<td>teaching assistantship</td>
<td>2600-3200</td>
<td>9</td>
<td>18/sem. hr. 5-6 Teaching</td>
</tr>
<tr>
<td>research assistantship</td>
<td>2300-2900</td>
<td>9</td>
<td>18/sem. hr. 20 Research</td>
</tr>
</tbody>
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Witchita State University

WICHITA, KANSAS 67208
William M. Perel, Chairman
Department of Mathematics
Applications must be filed by March 1, 1971

<table>
<thead>
<tr>
<th>TYPE</th>
<th>STIPEND</th>
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<td>teaching assistantship</td>
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<td>10</td>
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Eastern Kentucky University

RICHMOND, KENTUCKY 40475
Bernie R. Lane, Chairman
Department of Mathematics
Applications must be filed by April 1, 1971

<table>
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<th>TYPE</th>
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<tbody>
<tr>
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<td>2200</td>
<td>9</td>
<td>300 5+ Teaching</td>
</tr>
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Morehead State University

MOREHEAD, KENTUCKY 40351
Billy R. Nail, Chairman
Division of Mathematical Sciences
Applications must be filed by March 1, 1971

<table>
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<th>TUITION</th>
<th>SERVICE REQUIRED</th>
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<td>SERVICE REQUIRED hours per week type of service</td>
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**University of Kentucky**

LEXINGTON, KENTUCKY 40506

James H. Wells, Chairman
Department of Mathematics

Applications must be filed by February 1, 1971

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (6); geometry and topology (9); analysis and functional analysis (17); applied mathematics (3). TOTAL 35.

<table>
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<tr>
<th>Fellowship (Federal) (10)</th>
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**University of Kentucky**

LEXINGTON, KENTUCKY 40506

R. L. Anderson, Chairman
Department of Statistics

Applications must be filed by *February 1, 1971 --, Fellowships; April 1, 1971 -- Assistantships.*

**Waiver of out-of-state fees.

<table>
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<th>Fellowship (2)</th>
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<td>Master's degrees by department</td>
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**University of Louisville**

LOUISVILLE, KENTUCKY 40208

Roger H. Geeslin, Chairman
Department of Mathematics

Applications must be filed by March 15, 1971

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<th>Teaching Assistantship (6)</th>
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<th>Teaching</th>
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**University of Louisville**

LOUISVILLE, KENTUCKY 40208

Raymond I. Fields, Acting Chairman
Department of Applied Mathematics and Computer Science

Applications must be filed by April 1, 1971

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<th>Teaching Assistantship (1)</th>
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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, 1971

| Teaching Assistantship (10) | 3000-2800 | 9 | 150 | 5 |

1130
Louisiana State University

Baton Rouge, Louisiana 70803
Luther I. Wade, Chairman
Department of Mathematics

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (13); geometry and topology (6); analysis and functional analysis (8). TOTAL 27.

Fellowship (5) 2000-3000* 9
Teaching Assistantship (35) 3800-7000 12
Research Assistantship (5) 2600* 9

*Most research assistants and fellows are eligible for a $1000 supplement for teaching.

Louisiana State University in New Orleans

New Orleans, Louisiana 70122
J. R. Foote, Chairman
Department of Mathematics
Applications must be filed by April 15, 1971

Teaching Assistantship 2400 9 25 6 Teaching

Louisiana Tech University

Ruston, Louisiana 71270
W. B. Temple, Head
Department of Mathematics
Applications must be filed by February 15, 1971

Teaching Assistantship (15) 2400-3000 9 2-6 Teaching or equivalent

McNeese State University

Lake Charles, Louisiana 70601
Patrick L. Ford, Head
Department of Mathematical Sciences
Applications must be filed by June 10, 1971

Teaching Assistantship (7) 600-2400 9 * 6 Teaching

*Out of state fees waived; $50 exemption from other fees.

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 360.

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 1 to W. B. Temple, Head, Department of Mathematics, Ruston, Louisiana, 71270.
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<td>Frank D. Quigley, Chairman</td>
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University of Southwestern Louisiana

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Bowdoin College

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*Proposal submitted to NSF, but no grant has been made to date.

University of Maine

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<td>Department of Mathematics</td>
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<tr>
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**MARYLAND**

**Johns Hopkins University**

BALTIMORE, MARYLAND 21218
J. H. Sampson, Chairman
Department of Mathematics

Number of degrees awarded in 1970:
- Baccalaureate degrees by institution: 425
- Baccalaureate degrees by department: 5
- Master's degrees by department: 1

Ph.D. degrees awarded during last three years by field of specialization:
- Algebra and number theory (6)
- Geometry and topology (3)
- Analysis and functional analysis (3)
  TOTAL 12.

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<th>TYPE</th>
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*Plus dependency allowances.

**Johns Hopkins University**

BALTIMORE, MARYLAND 21205
Alan Ross, Chairman
Department of Biostatistics
School of Public Health

Applications must be filed by February 28, 1971

Number of degrees awarded in 1970:
- Master's degrees by department: 3

Ph.D. degrees awarded during last three years by field of specialization:
- Probability and statistics (9).
  TOTAL 9.

| Fellowship (20)       | 2400-2800* | 12      | 3300             |

**Morgan State College**

BALTIMORE, MARYLAND 21212
Walter R. Talbot, Chairman
Department of Mathematics

Applications must be filed by January 15, 1971

Number of degrees awarded in 1970:
- Baccalaureate degrees by institution: 580
- Baccalaureate degrees by department: 42
- Master's degrees by department: 10

Fellowship (15) 3000 9

**University of Maryland**

COLLEGE PARK, MARYLAND 20742
J. K. Goldhaber, Chairman
Department of Mathematics

Applications must be filed by March 1, 1971

Number of degrees awarded in 1970:
- Baccalaureate degrees by institution: 5754
- Baccalaureate degrees by department: 75
- Master's degrees by department: 43

Ph.D. degrees awarded during last three years by field of specialization:
- Algebra and number theory (8)
- Geometry and topology (8)
- Logic (3)
- Analysis and functional analysis (10)
- Probability and statistics (4)
- Computer science and numerical analysis (6)
- Applied mathematics (25)
  TOTAL 62.

| Fellowship (32)       | 2400-4000  | 9-12    | 38-48/sem. hr. |
| Teaching Assistantship (120) | 2800-3200  | 9       | 4-6  Teaching or grading |
| Research Assistantship (5) | 3100-4700  | 9-12    | usually free 6-10 Research |

**University of Maryland**

COLLEGE PARK, MARYLAND 20742
William F. Atchison, Director
Department of Computer Science

Applications must be filed by March 1, 1971

Number of degrees awarded in 1970:
- Baccalaureate degrees by institution: 5754
- Master's degrees by department: 13

Teaching Assistantship (22) 2800-3000 9 4-6 Teaching
Research Assistantship (10) 3400-3850 9 38-48/sem. hr.

1133
UNIVERSITY OF MARYLAND

DEPARTMENT OF MATHEMATICS

The Department of Mathematics offers strong programs leading to the M. A. and Ph. D. degrees in the fields of Algebra, Applied Mathematics, Real and Complex Function Theory, Functional Analysis, Geometry, Logic, Number Theory, Numerical Analysis, Probability, Statistics and Topology. The M. A. is offered under either a thesis or a non-thesis option.

The courses offered are numerous and varied. Approximately 115 graduate and advanced undergraduate courses are given each year. Many of these are selected topics courses. More than ten seminars meet regularly, and one or more weekly colloquia attract visiting mathematicians from all parts of the world.

Opportunities for financial aid include a grant from the National Science Foundation that permits the Department of Mathematics to offer twelve Graduate Fellowships at $4000 to qualified beginning graduate students, and eight Senior Fellowships to advanced students. Fellowships from various government agencies and private organizations, and research assistantships, as well as about 120 teaching assistantships, are also available.

INSTITUTE FOR FLUID DYNAMICS AND APPLIED MATHEMATICS

Many students working for a degree in the area of applied mathematics find their thesis advisors from among the faculty of the Institute for Fluid Dynamics and Applied Mathematics. The faculty of the Institute teach many courses in the Mathematics Department, conduct various specialized seminars, and maintain a broad spectrum of research in applied mathematics. The fields of applied mathematics in which the Institute is particularly well represented include partial differential equations, ordinary differential equations, control theory, numerical analysis and approximation theory. These topics are studied with particular emphasis upon applications to practical problems.

COMPUTER SCIENCE CENTER

As an independent academic unit of the University, the Center offers M. S. and Ph. D. degrees in Computer Science.

Specialization is possible in the areas of numerical analysis; theory of computability; automata theory; programming languages; systems programming; picture processing and pattern recognition; automation and simulation of computer design; information storage, retrieval and dissemination; and mathematical and computational linguistics.

The Center provides computing service for all academic activities at the University. Present computer equipment includes a UNIVAC 1108 and an IBM 7094 as well as low and high speed remote terminals distributed over the University’s College Park, Baltimore and Catonsville campuses.

SPECIAL EVENTS

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<th>Year in Topological Dynamics</th>
<th>1970-71</th>
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<td>Year in Functional Analysis</td>
<td>1971-72</td>
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<td>—in each of these years, distinguished visitors will conduct special courses and seminars.</td>
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</table>

The University of Maryland campus is only eight miles from downtown Washington, with its well-known cultural and scholarly institutions, such as the Library of Congress. In addition, the concentration of government and industry in the Washington-Baltimore area creates considerable demand for skilled mathematicians and computer scientists.

See the University of Maryland’s listings for further details on financial aid.

For information and application forms write to:

Graduate Committee
Department of Mathematics

or

Admissions and Financial Awards Committee
Computer Science Center

University of Maryland, College Park, Maryland 20742

1134
University of Maryland, Baltimore County

BALTIMORE, MARYLAND 21228
Richard C. Roberts, Chairman
Division of Mathematics
Applications must be filed by*

Teaching Assistantship 2800 remission of fees 20
10 cr. hrs.

*Fall Semester - March 1, 1971; Spring Semester - August 1, 1971.

MASSACHUSETTS

Boston University

BOSTON, MASSACHUSETTS 02215
Robin E. Esch, Chairman
Department of Mathematics
Applications must be filed by February 15, 1971

Ph. D. degrees awarded during last three years by field of specialization: analysis and functional analysis (2); numerical analysis (4); applied mathematics (1). TOTAL 7.

Fellowship (3) 2500-3200 9
Teaching Fellowship (20) 2600-2800 9 6 Teaching
Teaching Assistantship (2) 9 10 Library, etc.

UNIVERSITY OF MARYLAND, BALTIMORE COUNTY

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

— FIELDS —

— FELLOWSHIPS AND 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

1135
<table>
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<td>Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (9); geometry and topology (3); analysis and functional analysis (6). TOTAL 18.</td>
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<tr>
<td><strong>Harvard University</strong></td>
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<tr>
<td>John T. Tate, Chairman</td>
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<tr>
<td>Department of Mathematics</td>
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<td>Applications must be filed by January 10, 1971</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 (9); logic (3); analysis and functional analysis (11); applied mathematics (1). TOTAL 32.</td>
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<td><strong>Teaching fellows may apply for Staff-Tuition Fellowships which cover tuition.</strong></td>
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<td>George F. Carrier, Chairman</td>
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<tr>
<td>Committee on Applied Mathematics*</td>
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<td>10–20</td>
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<td>Grading, some teaching</td>
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<td>4400</td>
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<td>*Students in Applied Mathematics may work either under the Committee of Applied Mathematics or the Division of Engineering and Applied Physics, the latter being more specialized. Assistantships and Fellowships listed here also apply to the Division.</td>
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<td><strong>20 are in the Committee on Applied Mathematics (CAM); 7 are in the Division of Engineering and Applied Physics (DEAP).</strong></td>
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<tr>
<td><strong>32 are in CAM; 64 are in DEAP.</strong></td>
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<tr>
<td>of financial assistance (with number anticipated in 1971-1972)</td>
<td>amount</td>
<td>9 or 12 mo.</td>
<td>if not included in stipend (dollars)</td>
<td>hours per week</td>
<td>type of service</td>
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<td>University Fellowship (3)</td>
<td>2600-4600</td>
<td>2600</td>
<td>variable</td>
<td>8</td>
<td>Assisting in undergraduate courses</td>
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<tr>
<td>Research Assistantship (10)</td>
<td>1500-4500**</td>
<td>2600***</td>
<td>variable</td>
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<td>1800 + tuition</td>
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</table>

*Teaching Assistants supplement their income by Research Assistantships, etc.

**$1500 for 1/5 time; $4500 for 3/5 time.

***$2600 for the first two years; $800 after that.

---

**Harvard University**

CAMBRIDGE, MASSACHUSETTS 02138

Arthur P. Dempster, Chairman
Department of Statistics

Applications must be filed by January 10, 1971

Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (17).

TOTAL 17.

---

**Lowell Technological Institute**

LOWELL, MASSACHUSETTS 01854

Andrew Ouellette, Acting Head
Department of Mathematics

Teaching Assistantship (6) 3000 9 6

---

**Massachusetts Institute of Technology**

CAMBRIDGE, MASSACHUSETTS 02139

Norman Levinson, Chairman
Department of Mathematics

Applications must be filed by January 15, 1971

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (10); geometry and topology (11); logic (9); analysis and functional analysis (19); computer science and numerical analysis (6); applied mathematics (10); operations research (2); probability (1); combinatorial analysis (1).

TOTAL 69.

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**Southeastern Massachusetts University**

NORTH DARTMOUTH, MASSACHUSETTS 02747

L. S. Kennison, Chairman
Department of Mathematics

Applications must be filed by July 15, 1971

Teaching Assistantship (4) 3000 10 300 6 max.
Tufts University

MEDFORD, MASSACHUSETTS 02155
James W. Schlesinger, Chairman
Department of Mathematics
Applications must be filed by April 1, 1971

<table>
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<th>Type of Assistance</th>
<th>Type of Service</th>
<th>Number of Degrees Awarded in 1970</th>
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<tr>
<td>Teaching Assistantship (4)</td>
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<td>4* Teaching</td>
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<td>Scholarship (8)</td>
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<td>NSF (1)</td>
<td>2600</td>
<td>4** Teaching</td>
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<tr>
<td>NDEA (1)</td>
<td>2400</td>
<td>4** Teaching</td>
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</table>

*4 class contact hours and 6 hours preparation.
**4 class contact hours and 16 hours preparation.

University of Massachusetts

AMHERST, MASSACHUSETTS 01002
Wayman L. Strother, Head
Department of Mathematics and Statistics
Applications must be filed by February 1, 1971

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (10); geometry and topology (5); analysis and functional analysis (3). TOTAL 18.

<table>
<thead>
<tr>
<th>Type of Assistance</th>
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<tr>
<td>Fellowship (10)</td>
<td>2400-2600* 9</td>
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<tr>
<td>Teaching Fellowship (15)**</td>
<td>3000-3600* 3-6</td>
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<tr>
<td>Teaching Assistantship (55)</td>
<td>3200* 6</td>
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</table>

*Occasionally some summer employment is available at extra compensation.
**Only for students with M.A.

Worcester Polytechnic Institute

WORCESTER, MASSACHUSETTS 01609
John P. van Alstyne, Acting Head
Department of Mathematics
Applications must be filed by March 1, 1971

Teaching Assistantship (7) 2400 9

MICHIGAN

Andrews University

BERRIEN SPRINGS, MICHIGAN 49104
Edward J. Specht, Chairman
Department of Mathematics
Applications must be filed by February 15, 1971

<table>
<thead>
<tr>
<th>Type of Assistance</th>
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<tr>
<td>Fellowship (1)</td>
<td>2000 9 800</td>
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<tr>
<td>Teaching Assistantship (4)</td>
<td>2400-2600 9 800 10 Teaching</td>
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Central Michigan University

MT. PLEASANT, MICHIGAN 48858
Edward H. Whitmore, Chairman
Department of Mathematics
Applications must be filed by February 1, 1971

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<th>Type of Assistance</th>
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<tr>
<td>Fellowship (3)</td>
<td>2000 9</td>
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<td>(10)</td>
<td>1000 9</td>
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<tr>
<td>Teaching Assistantship (6)</td>
<td>2400-2700 9 6 Teaching</td>
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</table>
Eastern Michigan University

YPSILANTI, MICHIGAN 48197
Robert S. Pate, Head
Department of Mathematics
Applications must be filed by March 1, 1971

Teaching Fellowship (6) 3000-3300 9 540 6 Teaching

Michigan State University

EAST LANSING, MICHIGAN 48823
C. P. Wells, Chairman
Department of Mathematics
Applications must be filed by March 15, 1971

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (14); geometry and topology (20); analysis and functional analysis (9); computer science and numerical analysis (3); applied mathematics (2); group theory (9); matrix theory (1); automation theory (1); differential equations (1); graph theory (1); summability (1); pure mathematics (1); finite groups (1). TOTAL 54.

Fellowship (12) 2400-2800 12 15/cr.
Teaching Assistantship (120) 1449-3298 9 14/cr. 3 or 18 Teaching or Consulting
Research Assistantship (15) 3768-3864 12 14/cr. 20 Research
Scholarship (5) 500 9 400 12-15 Teaching
Graduate Tuition Scholarship (1) Fees 15/cr.

Michigan State University

EAST LANSING, MICHIGAN 48823
Harry G. Hedges, Chairman
Department of Computer Science
Applications must be filed by March 15, 1971

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

Fellowship (3) 2400-3000 12 14/cr. 3 or 18 Teaching or Consulting
Teaching Assistantship (7) 3000-3900 9
Research Assistantship (5) 3000-3900 9 14/cr. 20 Research

Michigan State University

EAST LANSING, MICHIGAN 48823
James Stapleton, Chairman
Department of Statistics and Probability
Applications must be filed by March 15, 1971

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

Fellowship (9) 2400-4300 12 400 12-15 Teaching
Teaching Assistantship (18) 2988-3348 9
Research Assistantship (2) 4464-4464 12 400 12-15 Research
Scholarship (1) 2400-2800 9 400

Michigan Technological University

HOUGHTON, MICHIGAN 49931
H. L. Hunzeker, Head
Department of Mathematics
Applications must be filed by March 1, 1971

Teaching Assistantship (12) 2550-2700 9 20 Teaching
Northern Michigan University

MARQUETTE, MICHIGAN 49855
Donald D. Heikkinen, Head
Department of Mathematics

Applications must be filed by March 15, 1971

Teaching Assistantship (4) 2400–2600 9
Tutorial Assistantship (4) 5500–5800 9

Teaching 4

Oakland University

ROCHESTER, MICHIGAN 48063
Harvey J. Arnold, Acting Chairman
Department of Mathematics

Teaching Assistantship (8) 2800 approx. 8

1170* 6–8

University of Detroit

DETOUR, MICHIGAN 48221
Karl W. Folley, Chairman
Department of Mathematics

Teaching Fellowship (7) 2400 8

6–8

University of Michigan

ANN ARBOR, MICHIGAN 48104
Cecil J. Nesbitt, Chairman
Department of Mathematics

Applications must be filed by February 1, 1971

Fellowship (70)* 1800–3000 9
Teaching Fellowship (110)** 2000–3000 9
Teaching Assistantship (45) 600–1800 9
Research Assistantship (15) 2500–4200 9
Scholarship (7)*** up to 2000

1140

Fellowship (70)*
Teaching Fellowship (110)**
Teaching Assistantship (45)
Research Assistantship (15)
Scholarship (7)***

*All types, including Institutional, NSF, NDEA & Actuarial Fellowships. Some available on 12 mos. basis with proportionately higher stipend.
**Approximately 30 will be combination appointments of 4-hr. fellowship & supplementary university research assistantship.
***Primarily for students in Actuarial Science.
University of Michigan

ANN ARBOR, MICHIGAN 48104
W. A. Ericson, Chairman
Department of Statistics

Applications must be filed by February 1, 1971

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

Fellowship (2–6) 1500–3600 9 540 or 1648* Teaching Fellowship (10) 3000–3600 9 540* 10 Teaching Assistantship (4) 750–1500 9 1648* 10–20 Research Assistantship (2) 3000–3600 9 1648* 20

*Residents of state pay $540 regardless of fellowship assistance.

Wayne State University

DETROIT, MICHIGAN 48202
Martin T. Wechsler, Chairman
Department of Mathematics

Applications must be filed by February 15, 1971*

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (2); analysis and functional analysis (7); probability and statistics (5). TOTAL 14.

Fellowship (12) 2400 Teaching Fellowship (25) 3200–4000 9 450 6 Teaching Assistance (30) 3000–4700 9 450 6 Teaching

*Late applications considered.

Western Michigan University

KALAMAZOO, MICHIGAN 49001
A. Bruce Clarke, Head
Department of Mathematics

Applications must be filed by *

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

Fellowship (25) 2800–3800 8 440 0–3 Teaching
2400–4400 12 660 0–3 Teaching
Teaching Assistantship (20) 2800–3000 8 360 6 Teaching
3500–3700 10 450 6 Teaching

*February 15, 1971 - Fellowships; March 1, 1971 - Assistantships.

MINNESOTA

Bemidji State College

BEMIDJI, MINNESOTA 56601
W. Richard Slinkman, Chairman
Department of Mathematics and Computer Science

Applications must be filed by April 15, 1971

Teaching Assistantship (2) 2500 9 6–7 Teaching

*$9.00/credit hour resident, $19.00/credit hour non-resident, plus $30.00 in fees if registered for 9 credits or more, plus $15.00 in fees if registered for 8 or less credit hours.
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<td>9 or 12 mo.</td>
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<td>MANKATO, MINNESOTA 56001</td>
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<td>Francis Hatfield, Chairman</td>
<td>Baccalaureate degrees by institution</td>
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<td>Department of Mathematics, Astronomy and Computer Science</td>
<td>Baccalaureate degrees by department</td>
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<td>Martin O. Holoen, Chairman</td>
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<td>ST. CLOUD, MINNESOTA 56301</td>
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<td><strong>University of Minnesota</strong></td>
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<td>MINNEAPOLIS, MINNESOTA 55455</td>
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<td>Edgar Reich, Head</td>
<td>Baccalaureate degrees by institution</td>
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<td>Applications must be filed by February 1, 1971</td>
<td>Master's degrees by department</td>
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<tr>
<td>Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (2); geometry and topology (8); logic (2); analysis and functional analysis (15); probability and statistics (5); ordinary differential equations (5); partial differential equations (5). TOTAL 42.</td>
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<td>Fellowship (18)</td>
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<td>Teaching Assistantship (73)</td>
<td>3240-4860* 9</td>
<td>683*</td>
<td>5-7</td>
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<td>Research Assistantship (5)</td>
<td>3096-6192* 9-12</td>
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<td>Teaching Associateship (20)</td>
<td>3627-5440* 9</td>
<td>683*</td>
<td>5-7</td>
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<tr>
<td>*These represent current rates. Rates for 1971-72 have yet to be decided.</td>
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<tr>
<td>**Some fellowship stipends may be supplemented with a teaching assistantship.</td>
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<td><strong>University of Minnesota</strong></td>
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<tr>
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<td>Richard B. McHugh, Director</td>
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<td>928.50</td>
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<td>Research Assistantship (2)</td>
<td>3096-3960 9</td>
<td>20</td>
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</table>

1142
University of Minnesota

MINNEAPOLIS, MINNESOTA 55455
Bernard W. Lindgren, Chairman
Department of Statistics
Applications must be filed by April 1, 1971

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

<table>
<thead>
<tr>
<th>TYPE of financial assistance (with number anticipated in 1971-1972)</th>
<th>STIPEND amount in dollars</th>
<th>9 or 12 mo. if not included in stipend (dollars)</th>
<th>TUITION hours per week</th>
<th>SERVICE REQUIRED type of service</th>
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</thead>
<tbody>
<tr>
<td>Fellowship (3)</td>
<td>2400-2800</td>
<td>12</td>
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<tr>
<td>Teaching Assistantship (15)</td>
<td>3240*</td>
<td>9</td>
<td>500</td>
<td>12 Teaching, grading</td>
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<tr>
<td>Research Assistantship (3)</td>
<td>3096*</td>
<td>9</td>
<td>500</td>
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MISSISSIPPI

Mississippi State College for Women

COLUMBUS, MISSISSIPPI 39701
Donald A. King, Head
Department of Mathematics
Applications must be filed by March 1, 1971

<table>
<thead>
<tr>
<th>TYPE of financial assistance (with number anticipated in 1971-1972)</th>
<th>STIPEND amount in dollars</th>
<th>9 or 12 mo. if not included in stipend (dollars)</th>
<th>TUITION hours per week</th>
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<tr>
<td>Fellowship (3)</td>
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<tr>
<td>Graduate Assistantship (3)</td>
<td>1000-1600</td>
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<td>6-10</td>
<td>Tutoring, paper grading, etc.</td>
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Mississippi State University

STATE COLLEGE, MISSISSIPPI 39762
Roy D. Sheffield, Head
Department of Mathematics
Applications must be filed by March 15, 1971

<table>
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<th>TYPE of financial assistance (with number anticipated in 1971-1972)</th>
<th>STIPEND amount in dollars</th>
<th>9 or 12 mo. if not included in stipend (dollars)</th>
<th>TUITION hours per week</th>
<th>SERVICE REQUIRED type of service</th>
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<tbody>
<tr>
<td>Teaching Assistantship (15)</td>
<td>1500-3000</td>
<td>9</td>
<td>24/cr. hr.</td>
<td>3-6 Teaching</td>
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</table>

University of Mississippi

UNIVERSITY, MISSISSIPPI 38677
T. A. Bickerstaff, Chairman
Department of Mathematics
Ph. D. degrees awarded during last three years by field of specialization: functional analysis (1). TOTAL 1.

<table>
<thead>
<tr>
<th>TYPE of financial assistance (with number anticipated in 1971-1972)</th>
<th>STIPEND amount in dollars</th>
<th>9 or 12 mo. if not included in stipend (dollars)</th>
<th>TUITION hours per week</th>
<th>SERVICE REQUIRED type of service</th>
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<tr>
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<td>Teaching Assistantship (25)</td>
<td>1200-4000</td>
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<td>payable 6-10</td>
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University of Southern Mississippi

HATTIESBURG, MISSISSIPPI 39401
Porter G. Webster, Acting Chairman
Department of Mathematics
Applications must be filed by March 1, 1971

<table>
<thead>
<tr>
<th>TYPE of financial assistance (with number anticipated in 1971-1972)</th>
<th>STIPEND amount in dollars</th>
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<th>TUITION hours per week</th>
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<tr>
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<td>159/qtr.</td>
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1143
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<th>9 or 12 mo.</th>
<th>TUITION if not included in stipend (dollars)</th>
<th>SERVICE REQUIRED hours per week type of service</th>
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<tr>
<td><strong>Central Missouri State College</strong></td>
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<tr>
<td>WARRENSBURG, MISSOURI 64093</td>
<td></td>
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</tr>
<tr>
<td>H. Keith Stumpff, Head Department of Mathematics</td>
<td></td>
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<tr>
<td>Applications must be filed by March 31, 1971</td>
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<tr>
<td>Teaching Assistantship (5)</td>
<td>1800-3600</td>
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<td>100/term 5-10</td>
<td>Teaching</td>
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<tr>
<td><strong>St. Louis University</strong></td>
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<tr>
<td>ST. LOUIS, MISSOURI 63103</td>
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<td></td>
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</tr>
<tr>
<td>Francis Regan, Chairman Department of Mathematics</td>
<td></td>
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<tr>
<td>Applications must be filed by December 31, 1970</td>
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</tr>
<tr>
<td>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 (5); probability and statistics (2); computer science and numerical analysis (4). TOTAL 19.</td>
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<tr>
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<td>varies 6</td>
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<td>Teaching Assistantship (4)</td>
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<td>9</td>
<td>Teaching</td>
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<td><strong>Southwest Missouri State College</strong></td>
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<td>SPRINGFIELD, MISSOURI 65802</td>
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<tr>
<td>L. Thomas Shiflett, Head Department of Mathematics</td>
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<td>Applications must be filed by March 15, 1971</td>
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<tr>
<td>Teaching Assistantship (3)</td>
<td>2400</td>
<td>9</td>
<td>270/yr. 8</td>
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<td><strong>University of Missouri-Columbia</strong></td>
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<tr>
<td>COLUMBIA, MISSOURI 65201</td>
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<tr>
<td>W. R. Utz, Chairman Department of Mathematics</td>
<td></td>
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</tr>
<tr>
<td>Applications must be filed by *</td>
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<tr>
<td>Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (9); geometry and topology (3); analysis and functional analysis (5). TOTAL 17.</td>
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<td>Fellowship (6)</td>
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<td>Teaching</td>
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<tr>
<td>Teaching Assistantship (65)</td>
<td>2900-3490</td>
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<td>250/sem. 5-7</td>
<td>Teaching</td>
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<td>*February 20, 1971 - Fellowships; March 31, 1971 - Assistantships.</td>
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<tr>
<td><strong>University of Missouri-Columbia</strong></td>
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<td>COLUMBIA, MISSOURI 65201</td>
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</tr>
<tr>
<td>Paul Blackwell, Chairman Department of Computer Science</td>
<td></td>
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</tr>
<tr>
<td>Teaching Fellowship (2)</td>
<td>2800</td>
<td>9</td>
<td>3</td>
<td>Teaching</td>
</tr>
<tr>
<td>Teaching Assistantship (7)</td>
<td>2800</td>
<td>9</td>
<td>6</td>
<td>Teaching</td>
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NUMBER OF DEGREES AWARDED IN 1970
Baccalaureate degrees by institution 1536
Baccalaureate degrees by department 36
Master's degrees by department 9

NUMBER OF DEGREES AWARDED IN 1970
Baccalaureate degrees by institution 1103
Baccalaureate degrees by department 44
Master's degrees by department 8

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (9); geometry and topology (3); analysis and functional analysis (5). TOTAL 17.

Teaching Fellowship (2) 2800 9 3 Teaching
Teaching Assistantship (7) 2800 9 6 Teaching

Diversity of Missouri- Columbia

NUMBER OF DEGREES AWARDED IN 1970
Baccalaureate degrees by institution 3231
Baccalaureate degrees by department 57
Master's degrees by department 17

Teaching Fellowship (2) 2800 9 3 Teaching
Teaching Assistantship (7) 2800 9 6 Teaching

1144
### University of Missouri-Columbia

<table>
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<th>Type</th>
<th>Stipend</th>
<th>Tuition</th>
<th>Service Required</th>
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</tr>
<tr>
<td></td>
<td>in dollars</td>
<td>in stipend (dollars)</td>
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</table>

COLUMBIA, MISSOURI 65201

Frederick Williams, Chairman
Department of Statistics

Applications must be filed by *

<table>
<thead>
<tr>
<th>Type</th>
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<th>Service Required</th>
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</tbody>
</table>

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

Fellowship (2) | 1800–2800+ | 9–12 | 250/sem. | 3 | Teaching |
Teaching Fellowship (2) | 2800–3600 | 9–12 | 250/sem. | 6 | Teaching |
Teaching Assistantship (13) | 2800–3500 | 9 | 250/sem. | 12–20** | Research, consulting |
Research Assistantship (5) | 2800–5000 | 9–12 | 250/sem. | 12–20** | Research, consulting |

*February 20, 1971 - Fellowships; March 31, 1971 - Assistantships.
**Full time in summer.

### University of Missouri-Kansas City

KANSAS CITY, MISSOURI 64110

Paul Liebnitz, Chairman
Department of Mathematics

Applications must be filed by March 15, 1971

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

Teaching Assistantship (17) | 3350–3550 | 9 | 505 | 10 | Variable |
NDEA Title IV Fellowship (1) | 2400* |
NSF Traineeship (2) | 2400* |

*Plus $500 per dependent.

---

**UNIVERSITY OF MISSOURI-KANSAS CITY**

**GRADUATE STUDY IN MATHEMATICS**

**1971-1972**

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, and ring theory.

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 $3,350 for nine months. Fees, amounting to $505 per year, are not included in these stipends.

Some NSF traineeships and NDEA Title IV 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

1145
University of Missouri-Rolla

ROLLA, MISSOURI 65401
Glen Haddock, Chairman
Department of Mathematics
Applications must be filed by February 15, 1971

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

<table>
<thead>
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<th>TYPE</th>
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<th>TUITION</th>
<th>SERVICE REQUIRED</th>
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<tr>
<td></td>
<td>amount</td>
<td>if not included</td>
<td>hours per week</td>
</tr>
<tr>
<td>of financial assistance (with number anticipated in 1971-1972)</td>
<td>in dollars</td>
<td>in stipend (dollars)</td>
<td>in 12 mo.</td>
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<td>Fellowship (3)</td>
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<td>200</td>
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<tr>
<td>Teaching Assistantship (32)</td>
<td>2800-3750</td>
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<td>200</td>
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<tr>
<td>Research Assistantship (2)</td>
<td>2800-3750</td>
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</table>

University of Missouri-Rolla

ROLLA, MISSOURI 65401
B. E. Gillett, Chairman
Department of Computer Science
Applications must be filed by February 15, 1971

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

<table>
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<td>hours per week</td>
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<td>in dollars</td>
<td>in stipend (dollars)</td>
<td>in 12 mo.</td>
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<td>Fellowship (4)</td>
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<tr>
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<tr>
<td>Scholarship (1)</td>
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*Plus $500 for each dependent.

Washington University

ST. LOUIS, MISSOURI 63130
Mitchell H. Taibleson, Chairman
Department of Mathematics
Applications must be filed by February 15, 1971

Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (4); computer science and numerical analysis (6); applied mathematics (5). TOTAL 15.

<table>
<thead>
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<th>TUITION</th>
<th>SERVICE REQUIRED</th>
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<td>hours per week</td>
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<td>in dollars</td>
<td>in stipend (dollars)</td>
<td>in 12 mo.</td>
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<td>Fellowship (3)</td>
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<tr>
<td>Research Assistantship (35)</td>
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1146
MONTANA

Montana State University

BOZEMAN, MONTANA 59715

Louis C. Barrett, Head
Department of Mathematics
Applications must be filed by February 15, 1971

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

Teaching Assistantship (18) 2600-3000 9 43/qtr. 6-7 Teaching
Traineeship (3) 2400 12

University of Montana

MISSOULA, MONTANA 59801

H. E. Reinhardt, Chairman
Department of Mathematics
Applications must be filed by March 15, 1971

TOTAL 3.

Fellowship (2) 3000-3600 9-12
Teaching Fellowship (5) 3000-3600 9 5 Teaching
Teaching Assistantship (20) 2400-2800 9 45* 65** 5 Teaching

*Resident.
**Non-Resident.

University of Montana

MISSOULA, MONTANA 59801

R. P. Banaugh, Chairman
Department of Computer Science
Applications must be filed by March 1, 1971

Graduate Assistantship (6) 2000-2400 9 60 12-15 Computer Center

NEBRASKA

Creighton University

OMAHA, NEBRASKA 68131

D. J. H. Fuller, Chairman
Department of Mathematics
Applications must be filed by March 15, 1971

Teaching Fellowship (3) 2500-2600 9 6 Teaching

Kearney State College

KEARNEY, NEBRASKA 68847

L. M. Larsen, Head
Department of Mathematics
Applications must be filed by March 1, 1971

Teaching Assistantship (6) 2000 9 15 6 Teaching
<table>
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<th>UNIVERSITY OF NEBRASKA</th>
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<tr>
<td>LINCOLN, NEBRASKA 68508</td>
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<tr>
<td>Loren Argabright, Chairman</td>
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<tr>
<td>Department of Mathematics</td>
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<tr>
<td>Applications must be filed by March 1, 1971</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 (5); probability and statistics (3); applied mathematics (1). TOTAL 15.

<table>
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<table>
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<tr>
<th>University of Nebraska at Omaha</th>
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<tbody>
<tr>
<td>OMAHA, NEBRASKA 68101</td>
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<tr>
<td>Paul A. Haeder, Head</td>
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<td>Department of Mathematics</td>
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<td>Applications must be filed by April 1, 1971</td>
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| Teaching Fellowship (8) | 2520 |

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<th>University of Nevada, Reno</th>
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<tr>
<td>RENO, NEVADA 89507</td>
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<tr>
<td>E. M. Beesley, Chairman</td>
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<td>Department of Mathematics</td>
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<td>Applications must be filed by April 1, 1971</td>
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| Teaching Fellowship (6) | 2500-2700 |

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<th>University of New Hampshire</th>
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<td>DURHAM, NEW HAMPSHIRE 03824</td>
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<tr>
<td>M. Evans Munroe, Chairman</td>
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<tr>
<td>Department of Mathematics</td>
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<td>Applications must be filed by February 15, 1971</td>
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Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (1); geometry and topology (2). TOTAL 3.

<table>
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<th>hours per week</th>
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<tr>
<td>Scholarship (3)</td>
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<tr>
<th>Fairleigh Dickinson University, Madison</th>
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<tr>
<td>MADISON, NEW JERSEY 07940</td>
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<tr>
<td>H. A. Elkholy, Chairman</td>
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<td>Department of Mathematics and Physics</td>
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| Teaching Fellowship (3) | 2000 |

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</table>
Fairleigh Dickinson University, Teaneck

Mabel Dukeshire, Chairman
Department of Mathematics and Computer Science
Applications must be filed by March 1971

Teaching Fellowship (8) 3000 12 6 Teaching

Montclair State College

Paul C. Clifford, Chairman
Department of Mathematics
Applications must be filed by April 1, 1971

Teaching Assistantship (3) 2000 9 0 + tuition 6

Newark College of Engineering

Henry Zatzkis, Chairman
Department of Mathematics

Teaching Assistantship (2)* 5774-7508 9 12

*Rutgers College does not offer the Ph.D. in Mathematics, Assistant Instructors are required to pursue their graduate work at nearby universities such as Columbia, New York University, and City University of New York. Newark College of Engineering pays 50% of the cost of such courses. This is in addition to the base salary for the Assistant Instructor.

RUTGERS UNIVERSITY

The State University of New Jersey

GRADUATE FELLOWSHIPS AND ASSISTANTSHIPS IN MATHEMATICS

Four-year financial support is available in the mathematics graduate program, with part-time teaching expected during two of the four years. Stipends range from about $3200 to $4100 and usually provide for remission of tuition. Fellowships are also awarded by the Mathematics Department under traineeship programs sponsored by the National Science Foundation and by the National Defense Education Act.

GRADUATE PROGRAM

A full program in mathematics is offered, leading to the M.S. and Ph.D. degrees. The department sponsors some 150 seminars each year, many of which are presented by visiting specialists. The mathematics library contains approximately 10,000 volumes and receives 270 journals of interest to mathematicians. This collection will be housed in the new Mathematical Sciences building which is expected to be completed by September, 1971. The University has an IBM 360/67 computer; a number of terminals are available for time-sharing use.

Applications for admission will be accepted until July 1, 1971. Students desiring financial support should submit their applications before March 1, 1971. For information and application forms, write to:

Graduate Admissions Office
RUTGERS UNIVERSITY
New Brunswick, New Jersey 08903

An equal opportunity employer

1149
<table>
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<tr>
<th>TYPE of financial assistance (with number anticipated in 1971-1972)</th>
<th>STIPEND amount in dollars</th>
<th>9 or 12 mo.</th>
<th>TUITION if not included in stipend (dollars)</th>
<th>SERVICE REQUIRED hours per week</th>
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**Princeton University**

PRINCETON, NEW JERSEY 08540

Elias M. Stein, Chairman
Department of Mathematics

Applications must be filed by January 15, 1971

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (4); geometry and topology (8); logic (1); analysis and functional analysis (8); applied mathematics (2); mathematical physics (3). TOTAL 26.

| NSF Fellowship (35) | 2400-2800 | either | * |
| Teaching Fellowship (4) | 2400-2800 | 9 | 1100 | 6 |
| Teaching Assistantship (8) | 3400 | 9 | 1100 | 10 |
| Research Assistantship (10) | 3200 | 9 | 1100 | 10 |
| Princeton Fellowships (9) | 2200-2600 | 9 | 1950 | 10 |
| Danforth (2) | 2800 | | 1950 |

*Tuition paid by NSF + NSF Traineeship. NOTE: Teaching Assistants who have not passed General Exam receive automatic rebate in tuition fee of $850; after passing Generals rebate is $1225. Same for Research Assistants.

**Princeton University**

PRINCETON, NEW JERSEY 08540

Geoffrey S. Watson, Chairman
Department of Statistics

Applications must be filed by January 15, 1971

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

| Fellowship (1) | 2000 | | * |
| Teaching Assistantship (3) | 750-5000 | 9 | * | 3-20 | Teaching |
| Research Assistantship (6) | 2300-2700 | 9 | * | 20 | Research |
| Loan (3) | 1800 max. | | * |

*In each case the student receives, in addition to the amount shown under stipend, a grant of $2600 which pays his full tuition.

**Rutgers University**

NEW BRUNSWICK, NEW JERSEY 08903

Kenneth G. Wolfson, Chairman
Department of Mathematics

Applications must be filed by March 1, 1971

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (7); geometry and topology (6); logic (2); analysis and functional analysis (8). TOTAL 23.

| General University Fellowship (10)* | 2000 | 9 | 5-6 | Teaching |
| Teaching Assistantship (25) | 3183 | 0 |
| Research Assistantship (35) | 3183-3700 | 9 |
| NDEA, NSF Fellowship (20) | 2400-2800** | 12 |

*Not available to first year students.

**Additional allowance for dependents.
Rutgers University

NEW BRUNSWICK, NEW JERSEY 08903
Arthur Cohen, Director
Department of Applied and Mathematical
Statistics
Applications must be filed by March 1, 1971

Ph. D. degrees awarded during last three years by field of specialization: applied and mathematical
statistics (19). TOTAL 19.

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Seton Hall University

SOUTH ORANGE, NEW JERSEY 07079
Joseph W. Andrushkiw, Chairman
Department of Mathematics
Applications must be filed by March 15, 1971

Stevens Institute of Technology

HOBOKEN, NEW JERSEY 07030
Roger S. Pinkham, Head
Department of Mathematics
Applications must be filed by February 1, 1971

Trenton State College

TRENTON, NEW JERSEY 08625
William Hausdoerffer, Chairman
Department of Mathematics
Applications must be filed by May 1, 1971

Eastern New Mexico University

PORTALES, NEW MEXICO 88130
Carroll K. Wilson, Chairman
Department of Mathematics

NEW MEXICO

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1151
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### New Mexico Highlands University

**LAS VEGAS, NEW MEXICO 87701**

K. A. Kirkpatrick, Head
Department of Physics and Mathematics

Applications must be filed by March 15, 1971

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<th>Teaching Assistantship (3)</th>
<th>2000</th>
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### New Mexico Institute of Mining and Technology

**SOCORRO, NEW MEXICO 87801**

Ralph W. Ball, Head
Department of Mathematics

Applications must be filed by March 1, 1971

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<th>Teaching Assistantship (6)</th>
<th>2600-2750</th>
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<th>Teaching</th>
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### New Mexico State University

**LAS CRUCES, NEW MEXICO 88001**

Robert J. Wisner, Chairman
Department of Mathematics

Applications must be filed by November 15, 1970

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<th>Teaching Assistantship (34)</th>
<th>2800-3200</th>
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### New Mexico State University

**LAS CRUCES, NEW MEXICO 88001**

J. Mack Adams, Head
Department of Computer Science

Applications must be filed by February 15, 1971

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<th>Fellowship (1)</th>
<th>3400</th>
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### University of New Mexico

**ALBUQUERQUE, NEW MEXICO 87106**

L. H. Koopmans, Chairman
Department of Mathematics and Statistics

Applications must be filed by February 1, 1971

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*Some people on Fellowships can be given a teaching course per semester for 600/700 extra.
NEW YORK

Adelphi University

GARDEN CITY, NEW YORK 11530

F. V. Pohle, Chairman
Department of Mathematics

Applications must be filed by March 15, 1971

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

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<td>9 or 12 mo.</td>
<td>3-6 Teaching</td>
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<td>Research Assistantship (3)</td>
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<td>20 Programming</td>
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<td>Scholarship (3)</td>
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<td>NSF (2)</td>
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*Plus dependency allowance.

City University of New York, Brooklyn College

BROOKLYN, NEW YORK 11210

James Singer, Chairman
Department of Mathematics

Applications must be filed by March 15, 1971

Teaching Assistantship (3) 6350-7675 9 6-7
NSF Institute Participant (250) *

*Partial support (free tuition, etc.).

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 —
Professor F. V. Pohle (Chairman), Department of Mathematics
Adelphi University, Long Island, Garden City
New York, 11530; (516) PI-7-2200

1153
City University of New York, City College

NEW YORK, NEW YORK 10031
G. Freilich, Chairman
Department of Mathematics
Applications must be filed by April 1, 1971

Teaching Assistantship (2)  2400  9  10

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, 1971

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (4); geometry and topology (5); logic (2); analysis and functional analysis (4); applied mathematics (7). TOTAL 22.

NUMBER OF DEGREES AWARDED IN 1970
Baccalaureate degrees by institution  2845
Baccalaureate degrees by department  153
Master's degrees by department  3

Fellowship (5)   2400-2800  12
Teaching Assistantship (14)   3000-6000  9
Research Assistantship (6)   3200-3600  9-12
Scholarship (3)

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, 1971

Teaching Assistantship (10)   2900-4900  9
Scholarship (2)

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
City University of New York, Lehman College

BRONX, NEW YORK 10468
I. H. Rose, Chairman
Department of Mathematics
Applications must be filed by April 1, 1971

Teaching Assistantship (6) 3840-5925 9 45/cr.* 6-8 Teaching

*Tuition may be waived for teaching assistants.

City University of New York, Queens College

FLUSHING, NEW YORK 11367
Joseph Hershenov, Chairman
Department of Mathematics
Applications must be filed by March 1, 1971

Teaching Assistantship (2) 6200 approx. 9 35/cr. 7 Teaching

Clarkson College of Technology

POTSDAM, NEW YORK 13676
V. Lovass-Nagy, Chairman
Department of Mathematics
Applications must be filed by April 1, 1971

Fellowship (2) 2400-2800 9 variable Research
Teaching Assistantship (7) 2400-2700 9 3 Teaching
Research Assistantship (6) 4800-5200 12 2400 variable Research
Tuition Scholarship (2)

*Ph. D. program started last year.

Columbia University

NEW YORK, NEW YORK 10027
Edgar R. Lorch, Chairman
Department of Mathematics
Applications must be filed by January 11, 1971

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (20); geometry and topology (4); analysis and functional analysis (6); mathematical physics (1). TOTAL 31.

Fellowship (25) 2475-3300 9-12 10-12 Teaching for 2 years
Research Assistantship (17)
Other (4)

CLARKSON COLLEGE OF TECHNOLOGY
invites participation in its M.S. and recently developed Ph.D. programs. Faculty interests cover both pure and applied mathematics including algebra, analysis, communication theory, continuum mechanics, matrix theory and topology. These programs allow for considerable flexibility and individual attention. Financial support is available.

Inquiries should be sent to:
Chairman of the Graduate Committee
Department of Mathematics
Clarkson College of Technology
Potsdam, New York 13676
Columbia University

NEW YORK, NEW YORK 10027

Myron F. Rosskopf, Chairman
Department of Mathematical Education
Teachers College

Applications must be filed by February 1, 1971

Ph.D. degrees awarded during last three years by field of specialization: mathematics education (12).
TOTAL 12.

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Columbia University

NEW YORK, NEW YORK 10027

Howard Levene, Acting Chairman
Department of Mathematical Statistics

Applications must be filed by January 31, 1971

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

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<td>275/mo.</td>
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Cornell University

ITHACA, NEW YORK 14850

W. H. J. Fuchs, Chairman
Department of Mathematics

Applications must be filed by February 1, 1971

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (12); geometry and topology (6); logic (6); analysis and functional analysis (8); probability and statistics (3); applied mathematics (2). TOTAL 37.

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Cornell University

ITHACA, NEW YORK 14850

Lawrence E. Payne, Director
Center for Applied Mathematics

Applications must be filed by February 1, 1971

Ph.D. degrees awarded during last three years by field of specialization: applied mathematics (3). TOTAL 3.

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<td>Louis Nirenberg, Director</td>
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### New York University

NEW YORK, NEW YORK 10006  
Ernest Kurnow, Chairman  
Department of Quantitative Analysis  
School of Commerce and Graduate  
School of Business Administration  
Applications must be filed by February 1, 1971  
Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (6); operations research (9). TOTAL 15.

<table>
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<th>Type of financial assistance (with number anticipated in 1971-1972)</th>
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<th>Tuition</th>
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<td>18 cr. payable</td>
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### Polytechnic Institute of Brooklyn

BROOKLYN, NEW YORK 11201  
Harry Hochstadt, Chairman  
Department of Mathematics  
Applications must be filed by March 1, 1971  
Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (6); analysis and functional analysis (6); probability and statistics (5); computer science and numerical analysis (1). TOTAL 15.

<table>
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<th>Type of financial assistance (with number anticipated in 1971-1972)</th>
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<td>if not included in stipend (dollars)</td>
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### Rensselaer Polytechnic Institute

TROY, NEW YORK 12181  
George H. Handelman, Chairman  
Department of Mathematics  
Applications must be filed by February 15, 1971  
Ph. D. degrees awarded during last three years by field of specialization: geometry and topology (3); analysis and functional analysis (1); computer science and numerical analysis (3); applied mathematics (15); operations research (3); mathematical programming (4); graph theory (1). TOTAL 30.

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**POLYTECHNIC INSTITUTE OF BROOKLYN**  
Graduate Study In Mathematics  
**LOCATION:** Brooklyn Campus, and Long Island Center at Farmingdale, Long Island, New York.  
**DEGREES:** M.S. and Ph.D.  
**FIELDS:** Applied Mathematics, Algebra, Analysis, Probability, Statistics, etc.  
**AVAILABLE MINOR OPTIONS:** Applied Mechanics, Aerospace Engineering, Electrophysics, Communication Theory, Automatic Control, Network Theory, Physics, etc.  
**FELLOWSHIPS:** Teaching, Research.  
**Write for information to:**  
Dean of Graduate School · · · or · · · Department of Mathematics  
Polytechnic Institute of Brooklyn  
333 Jay Street  
Brooklyn, New York 11201

---

1158
## St. John’s University

JAMAICA, NEW YORK 11432
Michael Capobianco, Chairman
Department of Mathematics
Applications must be filed by March 15, 1971

**Teaching Assistantship (10) 2400–2600 10 12 Teaching, Grading, Proctoring**

### State University College at Buffalo

BUFFALO, NEW YORK 14222
Rudolph J. Cherkauer, Chairman
Department of Mathematics
Applications must be filed by February 15, 1971

**Teaching Assistantship (4) 2500–2700 9 3–6 Teaching**

### State University College at Fredonia

FREDONIA, NEW YORK 14063
Frank R. Olson, Chairman
Department of Mathematics
Applications must be filed by March 1, 1971

**Teaching Assistantship (6) 2200–2600 9 6 Teaching**

### State University College at Geneseo

GENESEO, NEW YORK 14454
William A. Small, Chairman
Department of Mathematics
Applications must be filed by March 15, 1971

**Teaching Assistantship (2) 2500 9 12 Teaching**

*Does not include August graduates.

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**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 1971-72. Interested students are requested to write:

Michael F. Capobianco, Chairman
Department of Mathematics—St. John’s University
Jamaica, New York 11432
**State University College at New Paltz**

NEW PALTZ, NEW YORK 12561  
Arthur W. J. Ullman, Chairman  
Department of Mathematics

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**State University College at Oswego**

OSWEGO, NEW YORK 13126  
Richard D. Mayer, Chairman  
Department of Mathematics

Applications must be filed by March 15, 1971

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<td>Baccalaureate degrees by department</td>
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<td>Master's degrees by department</td>
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**State University College at Plattsburgh**

PLATTSBURGH, NEW YORK 12901  
William E. Hartnett, Chairman  
Department of Mathematics

Applications must be filed by February 1, 1971

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<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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**State University of New York at Albany**

ALBANY, NEW YORK 12220  
Vincent F. Cowling, Chairman  
Department of Mathematics

Applications must be filed by February 15, 1971

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<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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**STATE UNIVERSITY OF NEW YORK BINGHAMTON**

**RESEARCH ASSOCIATESHIPS IN MATHEMATICS**  
1971-72

We invite applications for Research Associateships in mathematics. These are one-year appointments with possible renewal. Stipends: $10,000 for the academic year. Teaching load: two courses one semester and full-time research for one semester.

Applicants should have received the Ph. D. degree in mathematics by September, 1971. For information, write to: Professor L. F. McAuley, Department of Mathematics. Deadline for applications is March 1, 1971.

1160
State University of New York at Albany

ALBANY, NEW YORK 12222

Edwin D. Reilly, Jr., Chairman
Department of Computer Science
Applications must be filed by February 15, 1971

Teaching Assistantship (5) 3000 9 20  Teaching
Research Assistantship (5) 3000 9 20  Programming

NUMBER OF DEGREES AWARDED IN 1970
Baccalaureate degrees by institution 1516
Master's degrees by department 3

State University of New York at Binghamton

BINGHAMTON, NEW YORK 13901

L. F. McAuley, Chairman
Department of Mathematics
Applications must be filed by March 15, 1971

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

Fellowship (3) 2250-3250 9
Teaching Assistantship (8) 2250-3250 9
Research Assistantship (4) 2500-3500 12
Graduate Assistantship (12) 2500-3500 9
Part-time Instructorship (2) 3000-7000 9

NUMBER OF DEGREES AWARDED IN 1970
Baccalaureate degrees by institution 596
Baccalaureate degrees by department 26
Master's degrees by department 6

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. Admission to full graduate standing requires the equivalent of a strong undergraduate major in mathematics. Applicants, particularly those interested in the Ph. D. program or in financial aid, are urged to submit GRE scores. Applications should be submitted on or before March 15, 1971.

Special fellowships and graduate assistantships with stipends up to $3,250 plus remission of tuition are available. Some part-time instructorships with considerably higher stipends are also held by graduate students. Deadline for applications: March 15, 1971.

New York State residents may qualify for awards for graduate study at State University of New York at Binghamton under the New York State Scholar Incentive Award Program. New York State Regents Scholar Teaching Fellowships are available paying up to $2500 per year. Additional aid may be obtained from the university. An outstanding student could obtain as much as $4000 a year. Applications are due by December 1, 1970. For information and application forms, write to Regents Examination and Scholarship Center, State Education Department, Albany, New York 12204.

Application forms for admission to the Graduate School and for Assistantships and Fellowships may be obtained from the Director of Admissions, State University of New York at Binghamton, Binghamton, New York 13901.
State University of New York at Buffalo

AMHERST, NEW YORK 14226
Lowell Schoenfeld, Acting Chairman
Department of Mathematics
Applications must be filed by March 1, 1971

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

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The State University of New York at
BUFFALO
Announces the New Positions of
GEORGE WILLIAM HILL AND EMMY NOETHER
RESEARCH INSTRUCTORSHIPS

George William Hill and Emmy Noether Research Instructorships are offered to provide promising young mathematicians, who have recently received their Ph.D. degree, with ample opportunity to carry forward a research program. Two Research Instructorships are awarded yearly with each appointment being for two years. The stipend for the 12 months beginning September 1971 is $15,300. Generous staff benefits are available to appointees. Research Instructors will teach a total of two one-semester courses during the 12 months in order to maintain contact with students, but no committee assignments will be given.

Upon expiration of the two year appointment, a Research Instructor will receive priority consideration for a regular three year appointment as Assistant Professor. The appointment as Assistant Professor will be based upon success and potential in both research and teaching.

The Hill and Noether Research Instructors for 1971-72 must have completed all requirements for the Ph.D. degree by September 1, 1971 in order to assume their appointments. Each applicant should prepare both 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 the supporting letter should be sent to the Chairman, Department of Mathematics, SUNY at Buffalo, 4246 Ridge Lea Road, Amherst, New York 14226, so as to arrive by January 15, 1971. Appointments will be announced by February 15.

STATE UNIVERSITY OF NEW YORK—BINGHAMTON
RESEARCH PARTICIPATION PROGRAM for COLLEGE TEACHERS
June 14—August 20, 1971

Applications are invited from college teachers who are research mathematicians either with the Ph.D. degree in mathematics or prepared to write a Ph.D. thesis. Members of the program will be actively involved in research seminars and where necessary attend lectures for background material. Research areas include: (1) Polyhedral Topology Theory (2) Graph Theory (3) Functional Analysis (4) Mapping Theories (open, monotone, and light).

A number of Ph.D. research mathematicians presently teach in four-year institutions with poor or non-existent research facilities. Our program, supported by The National Science Foundation, will enable a selected group to work closely with experienced researchers. Participants will receive modest stipends and partial travel allowances. For information, write to Professor L. F. McAuley, Department of Mathematics, State University of New York at Binghamton, Binghamton, New York 13901.
State University of New York at Buffalo

AMHERST, NEW YORK 14226
Anthony Ralston, Chairman
Department of Computer Science
Applications must be filed by February 15, 1971

<table>
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<th>TYPE</th>
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Number of degrees awarded in 1970:
Baccalaureate degrees by institution: 1541
Master's degrees by department: 10

State University of New York at Buffalo

BUFFALO, NEW YORK 14226
Seymour Geisser, Chairman
Department of Statistics
Applications must be filed by March 15, 1971

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

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Number of degrees awarded in 1970:
Baccalaureate degrees by institution: 1541
Baccalaureate degrees by department: 3
Master's degrees by department: 5

State University of New York at Stony Brook

STONY BROOK, NEW YORK 11790
Irwin Kra, Acting Chairman
Department of Mathematics
Applications must be filed by March 1, 1971

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (3), geometry and topology (2), analysis and functional analysis (1), TOTAL 6.

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Number of degrees awarded in 1970:
Baccalaureate degrees by institution: 1215
Baccalaureate degrees by department: 91
Master's degrees by department: 7

STATE UNIVERSITY OF NEW YORK AT BUFFALO

Graduate assistantships are available in various amounts with remission of tuition. An increase in stipends is expected 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, 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, Buffalo, New York 14226
State University of New York at Stony Brook

STONY BROOK, NEW YORK 11790

Irving Gerst, Chairman
Department of Applied Mathematics and Statistics

Applications must be filed by February 1, 1971

Ph. D. degrees awarded during last three years by field of specialization: applied mathematics (5). TOTAL 5.

Fellowship (4) 2600 or higher
Teaching Fellowship (3) 2800-3000 9
Teaching Assistantship (25) 2800-3000 9
Research Assistantship (25) 2800-3000 9
Professorial Grant (6)* 2800-3000 9

*NSF, AEC, UN, etc.

Syracuse University

SYRACUSE, NEW YORK 13210

Donald Kibbey, Chairman
Department of Mathematics

Applications must be filed by March 1, 1971

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (5); geometry and topology (5); analysis and functional analysis (18); applied mathematics (3). TOTAL 31.

Fellowship (5) 2400-2800 9
Teaching Assistantship (22) 2550 9

University of Rochester

ROCHESTER, NEW YORK 14627

Gail S. Young, Chairman
Department of Mathematics

Applications must be filed by February 15, 1971

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (6); geometry and topology (6); analysis and functional analysis (5); probability and statistics (1). TOTAL 18.

Fellowship (15)* 2000-2800 12
Teaching Assistantship (30) 2700 9

*About 5 part-time teaching assistantships up to $1000 (9 months) are available for fellowship holders.

University of Rochester

ROCHESTER, NEW YORK 14627

W. J. Hall, Chairman
Department of Statistics

Applications must be filed by March 1, 1971

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (6); geometry and topology (6); analysis and functional analysis (5); probability and statistics (1). TOTAL 18.
<table>
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<th>TYPE of financial assistance (with number anticipated in 1971-1972)</th>
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<td>Lewis A. Coburn, Chairman</td>
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<td>Ph. D. degrees awarded during last three years by field of specialization: logic (4); analysis and functional analysis (6). TOTAL 10.</td>
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1165
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1166
University of North Carolina

CHAPEL HILL, NORTH CAROLINA 27514
Bernard G. Greenberg, Chairman
Department of Biostatistics
Applications must be filed by April 1, 1971

Ph.D. degrees awarded during last three years by field of specialization: probability and statistics (5); public health (1). TOTAL 6.

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University of North Carolina

CHAPEL HILL, NORTH CAROLINA 27514
Frederick P. Brooks, Jr., Chairman
Department of Computer and Information Science
Applications must be filed by February 1, 1971

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

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*Plus $500 per dependent.

University of North Carolina

CHAPEL HILL, NORTH CAROLINA 27514
Floyd J. Gould, Chairman
Curriculum in Operations Research and Systems Analysis
Applications must be filed by January 31, 1971

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University of North Carolina

CHAPEL HILL, NORTH CAROLINA 27514
George E. Nicholson, Jr., Chairman
Department of Statistics
Applications must be filed by February 1, 1971

Ph.D. degrees awarded during last three years by field of specialization: probability and statistics (17). TOTAL 17.

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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 March 30, 1971

Fellowship (17) 2000–3200 9 300 3–6 Teaching
Research Assistantship (3) 1600–2400 9 300 not specific Research Assistant

Wake Forest University

WINSTON-SALEM, NORTH CAROLINA
Ivey C. Gentry, Chairman
Department of Mathematics
Applications must be filed by March 1, 1971

Fellowship (4) 3100 9 1700
Teaching Assistantship (2) 4100–4300 9 1700 12
Scholarship (4) 1700 9 1700

NORTH DAKOTA

North Dakota State University

FARGO, NORTH DAKOTA 58102
Robert F. Tidd, Chairman
Department of Mathematics
Applications must be filed by March 1, 1971

Teaching Assistantship (12) 2000–2700 9 27/qtr. half-time

University of North Dakota

GRAND FORKS, NORTH DAKOTA 58201
Ronald Bzoch, Chairman
Department of Mathematics
Applications must be filed by April 1, 1971

Teaching Assistantship (7) 2300

OHIO

Bowling Green State University

BOWLING GREEN, OHIO 43403
Louis C. Graue, Chairman
Department of Mathematics
Applications must be filed by

Fellowship (30)** 3000 + dep. 12 Teaching
Teaching Assistantship (26) 1400–2500 9 6
Summer Institute (30) 750 + dep.

*To be given first consideration, the applicant should apply by February 15, 1971.
**NSF AYI applied for.
Case Western Reserve University

CLEVELAND, OHIO 44106
Burton V. Dean, Chairman
Department of Operations Research
Applications must be filed by April 1, 1971

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

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Cleveland State University

CLEVELAND, OHIO 44115
W. R. Van Voorhis, Chairman
Department of Mathematics
Applications must be filed by May 15, 1971

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Kent State University

KENT, OHIO 44240
Richard K. Brown, Chairman
Department of Mathematics
Applications must be filed by April 15, 1971

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Miami University

OXFORD, OHIO 45056
Elwood Bohn, Chairman
Department of Mathematics
Applications must be filed by February 1, 1971

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Ohio State University

COLUMBUS, OHIO 43210
Arnold E. Ross, Chairman
Department of Mathematics

NUMBER OF DEGREES AWARDED IN 1970
Baccalaureate degrees by institution 5761
Baccalaureate degrees by department 71
Master's degrees by department 43

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (9); geometry and topology (7); analysis and functional analysis (11); probability and statistics (7); computer science and numerical analysis (1); applied mathematics (3); combinatorics (1). TOTAL 39.

Fellowship (30) 2400–varies* 12
Teaching Assistantship (150) 2700–3300 9
Research Assistantship (15) 2700–varies 9

*Some stipends are supplemented by dependents allowances.

Ohio State University

COLUMBUS, OHIO 43210
Marshall C. Yovits, Chairman
Department of Computer and Information Science

Applications must be filed by *

Fellowship (15) 2000–2200 9
Teaching Assistantship (25) 2475–up 9
Research Assistantship (25) 3300–up 12

*February 1, 1971 - Fellowships; April 15, 1971 - Assistantships.

Ohio State University

COLUMBUS, OHIO 43210
D. Ransom Whitney, Director
Division of Statistics

Applications must be filed by February 15, 1971

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

Fellowship (2) 2400–3000 9
Teaching Assistantship (15) 2700–3000 9

Ohio University

ATHENS, OHIO 45701
Robert G. Helsel, Chairman
Department of Mathematics

Applications must be filed by March 1, 1971*

Teaching Assistantship (15) 2700–3600 9

*Later applications accepted if vacancies exist.
University of Akron

AKRON, OHIO 44304
W. H. Beyer, Head
Department of Mathematics
Applications must be filed by March 1, 1971

Teaching Assistantship (10) 2400 9 18 Teaching and assisting professors

*In addition to 437 graduates in December, 1969.

University of Cincinnati

CINCINNATI, OHIO 45221
E. P. Merkes, Head
Department of Mathematics
Applications must be filed by May 15, 1971

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 (1). TOTAL 4.

University of Dayton

DAYTON, OHIO 45409
K. C. Schraut, Chairman
Department of Mathematics
Applications must be filed by March 1, 1971

Teaching Assistantship (10) 2800 9 6 Teaching
Research Assistantship (4) 2800-3400 9-12 20 Research

University of Toledo

TOLEDO, OHIO 43606
Simmie S. Blakney, Acting Chairman
Department of Mathematics
Applications must be filed by March 1, 1971

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

Wright State University

DAYTON, OHIO 45431
Carl C. Maneri, Chairman
Department of Mathematics
Applications must be filed by March 1, 1971

Teaching Assistantship (10) 2900-3000 9 4/qtr. hr. 6 Teaching
## Youngstown State University

YOUNGSTOWN, OHIO 44511  
Bernard J. Yozwiak, Chairman  
Department of Mathematics  
Applications must be filed by March 1, 1971

<table>
<thead>
<tr>
<th>Type of financial assistance (with number anticipated in 1971-1972)</th>
<th>Stipend</th>
<th>Tuition</th>
<th>Service Required</th>
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<tbody>
<tr>
<td>Financial assistance</td>
<td>12 mo.</td>
<td>in dollars</td>
<td>in stipend (dollars)</td>
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<tr>
<td>Tuition assistance</td>
<td>9 or 12 mo.</td>
<td>if not included</td>
<td>type of service</td>
</tr>
</tbody>
</table>

### Teaching Assistantship (6)

- 2600
- 9
- 5-6
- Teaching

## Xavier University

CINCINNATI, OHIO 45207  
James A. Delaney, Acting Chairman  
Department of Mathematics  
Applications must be filed by March 1, 1971

<table>
<thead>
<tr>
<th>Type of financial assistance (with number anticipated in 1971-1972)</th>
<th>Stipend</th>
<th>Tuition</th>
<th>Service Required</th>
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</thead>
<tbody>
<tr>
<td>Financial assistance</td>
<td>12 mo.</td>
<td>in dollars</td>
<td>in stipend (dollars)</td>
</tr>
<tr>
<td>Tuition assistance</td>
<td>9 or 12 mo.</td>
<td>if not included</td>
<td>type of service</td>
</tr>
</tbody>
</table>

### Teaching Assistantship (2)

- 2000
- 9
- 900 (full)
- 6
- 

### Scholarship (2)

- 1400
- 9
- 900 (full)
- 20
- Computer Center

## Oklahoma State University

STILLWATER, OKLAHOMA 74074  
John Jewett, Head  
Department of Mathematics and Statistics  
Applications must be filed by March 1, 1971*

### Scholarship (2)

- 2000
- 9
- 900 (full)
- 6
- 

### Computer Center (2)

- 2000
- 9
- 900 (full)
- 20
- Computer Center

## University of Oklahoma

NORMAN, OKLAHOMA 73069  
Gene Levy, Chairman  
Department of Mathematics  
Applications must be filed by March 1, 1971

### Fellowship (6)

- 2400-2900
- 12

### Teaching Assistantship (75)

- 2610-2790
- 9
- 14/sem. hr.
- 5-8

### Research Assistantship (5)

- 3190-3410
- 12
- 14/sem. hr.
- 20

*Accepted later if openings still exist.

*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 (3); probability and statistics (5). TOTAL 17.

## Ph.D. Degrees Awarded in 1970

- Baccalaureate degrees by institution: 1300
- Baccalaureate degrees by department: 45
- Master's degrees by department: 2

## University of Oklahoma

NORMAN, OKLAHOMA 73069  
Gene Levy, Chairman  
Department of Mathematics  
Applications must be filed by March 1, 1971

### Teaching Assistantship (8-10)

- 2475-2700
- 9
- 14/hr.
- 16
- Teaching

### Scholarships (2)

- 2000
- 9
- 900 (full)
- 6
- 

### Research Assistantship (1)

- 2600
- 9
- 20
- Research

*Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (6); geometry and topology (5); logic (1); analysis and functional analysis (4); applied mathematics (1). TOTAL 17.

*Accepted later if openings still exist.

*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 (3); probability and statistics (5). TOTAL 17.

*Accepted later if openings still exist.
OREGON

Oregon State University

CORVALLIS, OREGON 97331
David S. Carter, Acting Chairman
Department of Mathematics
Applications must be filed by February 10, 1971

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (2); geometry and topology (5); analysis and functional analysis (7); probability and statistics (4); computer science and numerical analysis (2); applied mathematics (8); foundations (2). TOTAL 30.

Fellowship (8)
Teaching Assistantship (46) 2610-3024 9 9-12/term 3-4 Teaching

Oregon State University

CORVALLIS, OREGON 97331
Lyle D. Calvin, Chairman
Department of Statistics
Applications must be filed by February 15, 1971

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

Fellowship (14)
Teaching Assistantship (6) 2700-3000 9 38/term 12-15 Teaching, Consulting
Research Assistantship (8) 2400-3600 9-12 38/term 12-15 Research, Consulting

*Plus dependency allowances.

Portland State University

PORTLAND, OREGON 97207
J. Richard Byrne, Head
Department of Mathematics
Applications must be filed by March 15, 1971

Teaching Assistantship (15) 2952 9 114 3-4 Teaching

University of Oregon

EUGENE, OREGON 97403
Charles W. Curtis, Head
Department of Mathematics
Applications must be filed by March 1, 1971

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (20); geometry and topology (5); analysis and functional analysis (11); probability and statistics (1); computer science and numerical analysis (3). TOTAL 40.

Fellowship (6) 2400-2800 12
Teaching Fellowship (40) 2300-3700 9 114 4-5 Teaching
Research Assistantship (5) 2300-3700 9 114 8-10 Research

*Figures for the academic year.
<table>
<thead>
<tr>
<th>TYPE OF FINANCIAL ASSISTANCE (with number anticipated in 1971-1972)</th>
<th>STIPEND AMOUNT IN DOLLARS</th>
<th>9 OR 12 MO. IN STIPEND (DOLLARS)</th>
<th>TUITION IF NOT INCLUDED HOURS PER WEEK</th>
<th>SERVICE REQUIRED TYPE OF SERVICE</th>
</tr>
</thead>
</table>

**PENNSYLVANIA**

**Bryn Mawr College**

BRYN MAWR, PENNSYLVANIA 19010

John C. Oxtoby, Chairman
Department of Mathematics

Applications must be filed by February 15, 1971

<table>
<thead>
<tr>
<th>Fellowship (1)</th>
<th>2000</th>
<th>9</th>
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<tbody>
<tr>
<td>Teaching Assistantship (2)</td>
<td>1550</td>
<td>9</td>
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<tr>
<td>Scholarship (1-2)</td>
<td>1000</td>
<td>9</td>
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<tr>
<td>Tuition Scholarship</td>
<td>1800</td>
<td>9</td>
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</table>

**Bucknell University**

LEWISBURG, PENNSYLVANIA 17837

David S. Ray, Chairman
Department of Mathematics

Applications must be filed by March 1, 1971

<table>
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<tr>
<th>Fellowship (2)</th>
<th>500</th>
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<tr>
<td>Teaching Assistantship (5)</td>
<td>2200-2400</td>
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<td>Scholarship (3)</td>
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</table>

**California State College**

CALIFORNIA, PENNSYLVANIA 15419

August J. Bethem, Chairman
Department of Mathematics

Applications must be filed by April 15, 1971

| Teaching Assistantship (2) | 1200 | 9 |

**Carnegie-Mellon University**

PITTSBURGH, PENNSYLVANIA 15213

I. I. Kolodner, Head
Department of Mathematics

Applications must be filed by March 15, 1971

<table>
<thead>
<tr>
<th>Fellowship (6)</th>
<th>1800-2400</th>
<th>9</th>
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</thead>
<tbody>
<tr>
<td>Teaching Fellowship (15)</td>
<td>2200</td>
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<tr>
<td>Teaching Assistantship (20)</td>
<td>2400-2600</td>
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</table>

**Carnegie-Mellon University**

PITTSBURGH, PENNSYLVANIA 15213

Morris H. DeGroot, Head
Department of Statistics

Applications must be filed by March 15, 1971

<table>
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<tr>
<th>Fellowship (4)</th>
<th>1800-2800</th>
<th>9 or 12</th>
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<tr>
<td>Teaching Assistantship (6)</td>
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<td>9</td>
</tr>
<tr>
<td>Research Assistantship (10)</td>
<td>2000-2700</td>
<td>9</td>
</tr>
</tbody>
</table>

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Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (2); geometry and topology (2); logic (2); analysis and functional analysis (10); computer science and numerical analysis (3); applied mathematics (2). TOTAL 21.

Ph.D. degrees awarded during last three years by field of specialization: probability and statistics (2). TOTAL 2.
<table>
<thead>
<tr>
<th>TYPE OF FINANCIAL ASSISTANCE (WITH NUMBER ANTICIPATED IN 1971-1972)</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>
</table>

Clarion State College

CLARION, PENNSYLVANIA 16214
Daniel Cronin, Chairman
Department of Mathematics

Teaching Assistantship (2) 1200 9 15 Teaching 1 or 2 sections of Basic Math.

Drexel University

PHILADELPHIA, PENNSYLVANIA 19104
Dale W. Lick, Head
Department of Mathematics
Applications must be filed by April 15, 1971

Fellowship (6) 2400-3600 12 6-8 Teaching
Teaching Assistantship (24) 2475-3900 9 20 Research
Research Assistantship (3) 3600 12

Duquesne University

PITTSBURGH, PENNSYLVANIA 15219
Charles F. Sebasta, Chairman
Department of Mathematics

Teaching Assistantship (4) 2000 9 6-8

Indiana University of Pennsylvania

INDIANA, PENNSYLVANIA 15701
Melvin R. Woodard, Chairman
Department of Mathematics
Applications must be filed by March 31, 1971

Graduate Assistantship (10) 1200 9 12 Misc.

*Including Math. Education majors.

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

1175
Kutztown State College

KUTZTOWN, PENNSYLVANIA 19530
Edward W. Evans, Head
Department of Mathematics
Applications must be filed by March 15, 1971

Teaching Assistantship (1-2) 1200 9 max. of 20 Problem sessions, paper reading, consulting

Lehigh University

BETHLEHEM, PENNSYLVANIA 18015
Everett Pitcher, Chairman
Department of Mathematics
Applications must be filed by March 1, 1971*

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 (13); computer science and numerical analysis (1); applied mathematics (2). TOTAL 25.

Fellowship (10) 2000–2400** 12
Teaching Fellowship (6) 2300 9 2 Teaching
Teaching Assistantship (27) 2500–2750 9 4–6 Teaching
Research Assistantship (2) 2000–2400 10–12 20 Research
Scholarship (2) tuition only

*Late applications are considered.
**Plus dependency allowances; 2 hours teaching for additional pay.

Lehigh University

BETHLEHEM, PENNSYLVANIA 18015
Ronald S. Rivlin, Chairman
Center for the Application of Mathematics

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

Research Assistantship (3) 4800–5200 12 20 Research

Pennsylvania State University

UNIVERSITY PARK, PENNSYLVANIA 16802
Raymond G. Ayoub, Head
Department of Mathematics
Applications must be filed by February 15, 1971

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (17); geometry and topology (5); logic (1); analysis and functional analysis (4); applied mathematics (3). TOTAL 30.

Fellowship (10) 2400–2800 9
Teaching Assistantship (70) 2880–3060 9 4 1/2 Teaching
Research Assistantship (10) 2880–3060 9 20 Research
Pennsylvania State University

UNIVERSITY PARK, PENNSYLVANIA 16802
Preston C. Hammer, Head
Department of Computer Science
Applications must be filed by February 15, 1971
Ph. D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (8). TOTAL 8.

| TYPE of financial assistance (with number anticipated in 1971-1972) | STIPEND amount in dollars | TUITION if not included in stipend (dollars) | SERVICE REQUIRED hours per week | type of service
<table>
<thead>
<tr>
<th></th>
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<td>Fellowship (8)</td>
<td>2400-up</td>
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<tr>
<td>Teaching Assistantship (32)</td>
<td>2700</td>
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<tr>
<td>Research Assistantship (10)</td>
<td>3600</td>
<td>12</td>
<td>20</td>
<td></td>
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</tbody>
</table>

Pennsylvania State University

UNIVERSITY PARK, PENNSYLVANIA 16802
William L. Harkness, Head
Department of Statistics
Applications must be filed by February 15, 1971
Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (8). TOTAL 8.

<table>
<thead>
<tr>
<th>NUMBER OF DEGREES AWARDED IN 1970</th>
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<tbody>
<tr>
<td>Baccalaureate degrees by institution</td>
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<td>Baccalaureate degrees by department</td>
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<td>Master’s degrees by department</td>
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<th>TYPE of financial assistance (with number anticipated in 1971-1972)</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 (3)</td>
<td>2400-3200</td>
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<tr>
<td>Teaching Assistantship (6)</td>
<td>2700-3060</td>
<td>9</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Research Assistantship (2)</td>
<td>2700-3060</td>
<td>9</td>
<td>20</td>
<td></td>
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</tbody>
</table>

Shippensburg State College

SHIPPENSBURG, PENNSYLVANIA 17257
James L. Sieber, Chairman
Department of Mathematics
Applications must be filed by March 15, 1971
Teaching Assistantship (2) 1800 9 20

Temple University

PHILA DELPHIA, PENNSYLVANIA 19122
Albert Schild, Chairman
Department of Mathematics
Applications must be filed by March 15, 1971
Ph. D. degrees awarded during last three years by field of specialization: analysis and functional analysis (1). TOTAL 1.

<table>
<thead>
<tr>
<th>NUMBER OF DEGREES AWARDED IN 1970</th>
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<tbody>
<tr>
<td>Baccalaureate degrees by institution</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 hours per week</th>
<th>type of service</th>
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<tr>
<td>Research Assistantship (8)</td>
<td>3000-3400</td>
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</table>

Temple University

PHILA DELPHIA, PENNSYLVANIA 19140
Stanley Schor, Chairman
Department of Biometrics
Medical School
Applications must be filed by July, 1971
Teaching Assistantship (6) 2400-3300 9 minimal
Research Assistantship (6) 2400-3300 9 minimal
Scholarship (6) tuition

1177
University of Pennsylvania

Philadelphia, Pennsylvania 19104

Harvey L. Garner, Director
Moore School of Electrical Engineering

Applications must be filed by February 1, 1971

Ph.D. degrees awarded during last three years by field of specialization:
- computer science and numerical analysis (6);
- electrical engineering (37);
- biomedical electronic engineering (11).

<table>
<thead>
<tr>
<th>Type</th>
<th>Stipend</th>
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<th>Service Required</th>
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<td>of financial assistance (with number anticipated in 1971-1972)</td>
<td>9 or if not included</td>
<td>12 mo. in stipend (dollars)</td>
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</tr>
</tbody>
</table>

University of Pittsburgh

Pittsburgh, Pennsylvania 15213

George Laush, Acting Chairman
Department of Mathematics

Applications must be filed by January 1, 1971

Ph.D. degrees awarded during last three years by field of specialization:
- algebra and number theory (4);
- geometry and topology (1);
- logic (1);
- analysis and functional analysis (12);
- computer science and numerical analysis (3);
- applied mathematics (1).

<table>
<thead>
<tr>
<th>University of Pittsburgh</th>
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<tbody>
<tr>
<td>Fellowship (5)</td>
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<td>Teaching Fellowship (20)</td>
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<tr>
<td>Teaching Assistantship (22)</td>
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</tbody>
</table>

University of Pittsburgh

Pittsburgh, Pennsylvania 15213

Orrin E. Taulbee, Chairman
Department of Computer Science

Applications must be filed by March 1, 1971

Ph.D. degrees awarded during last three years by field of specialization:
- algebra and number theory (4);
- geometry and topology (1);
- logic (1);
- analysis and functional analysis (12);
- computer science and numerical analysis (3);
- applied mathematics (1).

<table>
<thead>
<tr>
<th>University of Pittsburgh</th>
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<tbody>
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<td>Fellowship (2)</td>
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<td>Teaching Fellowship (4)</td>
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<td>Teaching Assistantship (8)</td>
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<tr>
<td>Research Assistantship (2)</td>
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TEMPLE UNIVERSITY, PHILADELPHIA

Dr. Albert Schild, Chairman
Department of Mathematics
Temple University
Philadelphia, Pennsylvania 19122

U. D.iversity of Pittsburgh
TYPE | STIPEND | TUITION | SERVICE REQUIRED
---|---|---|---
of financial assistance (with number anticipated in 1971-1972) | amount | 9 or if not included | hours per week | type of service
| in dollars | | in stipend (dollars) |

University of Pittsburgh

PITTSBURGH, PENNSYLVANIA 15213

A. G. Holzman, Chairman
Department of Industrial Engineering, Systems Management, Engineering and Operations Research
School of Engineering

Applications must be filed by August 1, 1971

Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (1); applied mathematics (5); cost analysis (1); management systems (1). TOTAL 8.

NDEA Fellowship (2) 1000 12
Teaching Assistantship (5) 2400 8
Research Assistantship (7) 2400 8
NSF Traineeship (2) 1000 12

*228 baccalaureate degrees given by the School of Engineering.

Villanova University

VILLANOVA, PENNSYLVANIA 19085

James O. Brooks, Chairman
Department of Mathematics

Applications must be filed by March 15, 1971

Teaching Assistantship (10) 2400 9

West Chester State College

WEST CHESTER, PENNSYLVANIA 19380

Richard G. Branton, Chairman
Department of Mathematics

Applications must be filed by November 1, 1970

Fellowship (80) Travel and book allowance and full tuition NSF in Service Institute
Part Time Instructor (1) 2700 9 payable 6 Teaching
Commonwealth Assistantship (2) 1200 9 payable 10 Graduate Assistant

Wilkes College

WILKES-BARRE, PENNSYLVANIA 18703

Bing Kuen Wong, Chairman
Department of Mathematics

Applications must be filed by March 15, 1971

Teaching Assistantship (2) 2700 9

Puerto Rico

University of Puerto Rico

MAYAGUEZ, PUERTO RICO 00708

Eugene A. Francis, Chairman
Department of Mathematics

Applications must be filed by April 30, 1971

Teaching Assistantship (15) 2625-3000 12 5 6 Teaching

*These figures correspond to academic year 1969-1970.
<table>
<thead>
<tr>
<th>TYPE</th>
<th>STIPEND</th>
<th>TUITION</th>
<th>SERVICE REQUIRED</th>
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<td>of financial assistance (with number anticipated in 1971-1972)</td>
<td>amount in dollars</td>
<td>9 or 12 mo.</td>
<td>if not included in stipend (dollars)</td>
</tr>
</tbody>
</table>

**RHODE ISLAND**

**Brown University**

PROVIDENCE, RHODE ISLAND 02912

John Wermer, Chairman
Department of Mathematics

Applications must be filed by January 15, 1971

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (2); geometry and topology (5); analysis and functional analysis (9). TOTAL 16.

| Fellowship (8-10) | 2000–2600 | 9 |
| Teaching Assistantship (12-15) | 2500–2700 | 9 |
| Research Assistantship (5-8) | 3500–4700 | 12 ** |
| Tuition | **4–7** | Teaching |
| Scholarships (2) | tuition |

*Includes 6 MAT degrees.
**Student pays 3/4 tuition out of stipend.

**Brown University**

PROVIDENCE, RHODE ISLAND 02912

J. P. LaSalle, Chairman
Division of Applied Mathematics

Applications must be filed by January 15, 1971

Ph.D. degrees awarded during last three years by field of specialization: analysis and functional analysis (2); probability and statistics (2); computer science and numerical analysis (1); applied mathematics (7). TOTAL 12.

| Fellowship (10) | 2400 | 9 |
| Teaching Assistantship (15) | 2400–3000 | 9 |
| Research Assistantship (18) | 2400–3000 | 9 |
| Scholarship (2) | tuition |
| Teaching and Research |

**Rhode Island College**

PROVIDENCE, RHODE ISLAND 02908

Robert F. Steward, Chairman
Department of Mathematics

Applications must be filed by March 1, 1971

| Teaching Assistantship (3) | 2100 | 9 |
| Teaching and Research |

**University of Rhode Island**

KINGSTON, RHODE ISLAND 02881

V. Lakshmikantham, Chairman
Department of Mathematics

Applications must be filed by April 15, 1971

| Fellowship (2) | 3000 | 9 |
| Teaching Assistantship (16) | 2500–2725 | 9 |
| Teaching |

**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, 1971

| Teaching Assistantship (5) | 2500–2575* | 9 |
| Research Assistantship (7) | 2500–2575* | 9 |

*Current figures.
Clemson University

CLEMSON, SOUTH CAROLINA 29631
John Kenelly, Head
Department of Mathematics
Applications must be filed by March 1, 1971

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 (5); probability and statistics (1). TOTAL 9.

Fellowship (7) 2400-2800*
Teaching Assistantship (60) 3660-4020 90/sem. 3-6 Teaching
Research Assistantship (6) 3260-3660 12 90/sem.

*$2400 for 1st year graduate students, $2600 for 2nd year graduate students, $2800 for 3rd year graduate students plus $500 per dependent.

University of South Carolina

COLUMBIA, SOUTH CAROLINA 29208
J. H. Wahab, Head
Department of Mathematics
Applications must be filed by March 1, 1971

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

Teaching Assistantship (50) 2800-3900 9 30 5-6 Teaching

THE MATHEMATICS DEPARTMENT OF
THE UNIVERSITY OF SOUTH CAROLINA
IS NOW ACCEPTING APPLICATIONS FOR
teaching assistantships for the 1971-1972 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, topology, 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:

Dr. William H. Caldwell
Director of Graduate Studies in Mathematics
Department of Mathematics
University of South Carolina
Columbia, South Carolina 29208
Winthrop College

ROCK HILL, SOUTH CAROLINA 29730
B. G. Hodges, Chairman
Department of Mathematics
Applications must be filed by April 15, 1971

Teaching Assistantship (4) 1160–1370 9 6 Teaching

SOUTH DAKOTA

South Dakota School of Mines & Technology

RAPID CITY, SOUTH DAKOTA 57701
Dean C. Benson, Head
Department of Mathematics
Applications must be filed by April 1, 1971

Teaching Assistantship (6) 2600 9 5/sem. hr. 4–5 Teaching
Research Assistantship (1) 2600 9 5/sem. hr. Research

South Dakota State University

BROOKINGS, SOUTH DAKOTA 57006
J. E. Richards, Acting Head
Department of Mathematics
Applications must be filed by March 1, 1971

Teaching Assistantship (4) 2400–2600 9 5/cr. 6 Teaching

University of South Dakota

VERMILLION, SOUTH DAKOTA 57069
William E. Ekman, Chairman
Department of Mathematics
Applications must be filed by March 15, 1971

Teaching Assistantship (10) 1800–2200 9 1/3 in state 4–5

TENNESSEE

Austin Peay State University

CLARKSVILLE, TENNESSEE 37040
William G. Stokes, Chairman
Department of Mathematics
Applications must be filed by April 1, 1971

Teaching Assistantship (4) 1500 9 225 3 Teaching
East Tennessee State University

JOHNSON CITY, TENNESSEE 37601
Lester C. Hartsell, Chairman
Department of Mathematics
Applications must be filed by April 30, 1971

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, 1971

Teaching Assistantship (22) 2200-2500 9

Middle Tennessee State University

MURFREESBORO, TENNESSEE 37130
Harold S. Spraker, Chairman
Department of Mathematics
Applications must be filed by April 15, 1971

Teaching Assistantship (8) 2160 6

Tennessee Technological University

COOKEVILLE, TENNESSEE 38501
Ralph C. Boles, Chairman
Department of Mathematics
Applications must be filed by April 1, 1971

Teaching Assistantship (10) 2250-2475 9

University of Tennessee

KNOXVILLE, TENNESSEE 37916
H. T. Mathews, Head
Department of Mathematics
Applications must be filed by February 20, 1971

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 (6); probability and statistics (2); computer science and numerical analysis (2); applied mathematics (2); topological algebra (2). TOTAL 21.

Fellowship (18) 2400-3400 9-12 15/qtr.
Teaching Fellowship (4) 3200-3600 9 15/qtr. 3-4 Teaching
Teaching Assistantship (50) 2800-3000 9 15/qtr. 6 Teaching

*13 are Master of Mathematics degrees for secondary school teachers.
Vanderbilt University

NASHVILLE, TENNESSEE 37203
B. F. Bryant, Chairman
Department of Mathematics
Applications must be filed by February 15, 1971

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 (1); computer science and numerical analysis (1). TOTAL 9.

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*Includes arts and sciences, engineering and nursing.

Vanderbilt University

NASHVILLE, TENNESSEE 37203
William H. Rowan, Jr., Chairman
Department of Systems and Information Science
Applications must be filed by February 15, 1971

Teaching Fellowship (6) | 4000-5000 | 9 |
Research Assistantship* | pays tuition |
Scholarship | 6 |
*Under NSF Grant, or other fund source.

TEXAS

East Texas State University

COMMERCE, TEXAS 75428
Dale R. Bedgood, Head
Department of Mathematics
Applications must be filed by April 1, 1971

Teaching Fellowship (3) | 3200 | 9 |
Teaching Assistantship (12) | 2700 | 9 |

Midwestern University

WICHITA FALLS, TEXAS 76308
Louie C. Huffman, Chairman
Department of Mathematics
Applications must be filed by April 30, 1971

Teaching Assistantship (6) | 2700 | 9 |

North Texas State University

DENTON, TEXAS 76203
Frank Connor, Chairman
Department of Mathematics
Applications must be filed by February 15, 1971

Fellowship (EPDA Part E) (8) | 3070 + 500/dependent | 12 |
Teaching Assistantship (22) | 2680-3160 | at least 12 |

1184
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**Rice University**

HOUSTON, TEXAS 77001  
Solomon Bochner, Chairman  
Department of Mathematics  
Applications must be filed by March 15, 1971

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 (10); computer science and numerical analysis (1). TOTAL 21.

- Fellowship (22)  
  1800-2400  
  9*  
  6-8  
  Grading, Teaching

- Research Assistantship (5)  
  1800-2400  
  9*  
  6-8  
  Grading, Teaching

- Scholarship (3)  
  tuition

*Correspondingly higher for 12 months.

**Rice University**

HOUSTON, TEXAS 77001  
Robert M. Thrall, Chairman  
Department of Mathematical Sciences  
Applications must be filed by February 15, 1971

Fellowship (8)  
2200-2400  
9  
10

Research Assistantship (3)  
2200-2400  
9  
10

Tuition Grants (3)

**St. Mary's University**

SAN ANTONIO, TEXAS 78228  
Frederick J. Carter, Chairman  
Department of Mathematics  
Applications must be filed by May 15, 1971

Teaching Assistantship (1)  
2000  
9  
43/sem.hr.  
6  
Teaching

Tuition Rebates  
9 sem. hr./sem.

**Sam Houston State University**

HUNTSVILLE, TEXAS 77340  
Glen E. Mattingly, Director  
Department of Mathematics  
Applications must be filed by April 1, 1971

Teaching Fellowship (5)  
2700-3150  
9  
6  
Teaching

Assistantship (6)  
2700-2925  
9  
15  
*

Assistantship (4)  
1800-2700  
9  
varies  
*

Junior College Internship (HEW) (5)  
2400-4500  
12  
**  
**

*Tutorials, assisting, grading, etc.  
**None first year; 6 hrs. teaching second year.

**Southern Methodist University**

DALLAS, TEXAS 75222  
David W. Starr, Chairman  
Department of Mathematics  
Applications must be filed by March 15, 1971

Fellowship (1)  
1800-2400  
9-12  
6-9  
Teaching

Teaching Assistantship (7)  
2200-3300  
9-12  
1600

Scholarship (1)  
1600

1185
Southern Methodist University

DALLAS, TEXAS 75222

Paul D. Minton, Chairman
Department of Statistics

Applications must be filed by April 15, 1971

Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (15). TOTAL 15.

Fellowship (12) 2400–2800* 12 payable
Research Assistantship (4) 1800 9 payable unspecified Research
Research Associateship (10) 5000–6000 12 payable unspecified Research
Scholarship (4)

*Plus dependents’ allotments of $500 each for 12 months.

Southwest Texas State University

SAN MARCOS, TEXAS 78666

Don Cude, Head
Department of Mathematics

Applications must be filed by March 15, 1971

Teaching Assistantship (12) 3000 9 6

Stephen F. Austin State University

NACOGDOCHES, TEXAS 75961

W. I. Layton, Head
Department of Mathematics

Applications must be filed by March 1, 1971*

Teaching Assistantship (26) 1500–3000 9 100 3–6

*Applications will be considered after that date if vacancies exist.

Texas A & I University

KINGSVILLE, TEXAS 78363

Virgil C. Kowalik, Chairman
Department of Mathematics

Applications must be filed by March 15, 1971

Teaching Assistantship (10) 2700 9 6

Texas A & M University

COLLEGE STATION, TEXAS 77843

G. R. Blakley, Head
Department of Mathematics

Applications must be filed by February 15, 1971

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

Fellowship (3) 2925–3375 9 50 or 200* Teaching
Teaching Assistantship (35) 2925–3375 9** 50 6 Various departmental duties
Research Assistantship (4) 2925–3375 9 50 or 200 10

NSF or NASA Traineeship (3) 2400–3800 12

*Non-resident tuition 200 per semester.
**Non-resident tuition waived.
Texas A & M University

COLLEGE STATION, TEXAS 77843
H. O. Hartley, Director
Institute of Statistics

Applications must be filed by April 1, 1971

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

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<td>250  20 approx.</td>
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<td>9 or 12</td>
<td>250  20 approx.</td>
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<td>Staff (2)</td>
<td>variable</td>
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*Plus $400 out of state.

Texas Christian University

FORT WORTH, TEXAS 76129
Landon A. Colquitt, Chairman
Department of Mathematics

Applications must be filed by March 1, 1971

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (3); geometry and topology (10); analysis and functional analysis (9). TOTAL 22.

<table>
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<td>Teaching Fellowship (5)</td>
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<td>3 Teaching</td>
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<td>6 Teaching</td>
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<td>Scholarship (5)</td>
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<td>8 Non-teaching</td>
</tr>
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<td>Computer Traineeship (3)</td>
<td>2400-3000</td>
<td>9</td>
<td>20 Computer Center</td>
</tr>
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</table>

TEXAS A & M UNIVERSITY

The Mathematics Faculty invites interested persons to inquire about its graduate program leading to the M. S. or Ph. D. degrees.

Fields: Algebra, Analysis, Functional Analysis, Numerical Analysis, Topology

Financial Assistance: Fellowships and Assistantships granted by the Department carry stipends ranging from $2700 to $3150 for nine months, non-resident tuition waived. Apply before February 15, 1971. Late applications will be considered.

Some NSF, NASA, and NDEA grants are available through the University on a competitive basis. Apply before March 15, 1971.

Application: Address all inquiries to

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

LUBBOCK, TEXAS 79409
P. L. Odell, Chairman
Department of Mathematics

Applications must be filed by May 1971

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

Teaching Assistantship (56) 2600-3400 9 100 6 Teaching

University of Houston

HOUSTON, TEXAS 77004
J. N. Younglove, Chairman
Department of Mathematics

Applications must be filed by April 1, 1971

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 (3). TOTAL 11.

Teaching Assistantship (45) 2250-3000 9 94/sem. 6 Teaching

University of Houston

HOUSTON, TEXAS 77004
H. G. Osburn, Chairman
Department of Computer Science

Applications must be filed by July 1, 1971

Teaching Fellowship (11) 2250-2430 9 20 Teaching
Research Assistantship (5) 2250-2700 9 20 Research

University of Texas at Arlington

ARLINGTON, TEXAS 76010
Basil Wall, Chairman
Department of Mathematics

Applications must be filed by March 1, 1971

Fellowship (3) 2700 9 Fellowship
Teaching Assistantship (20) 2700 9

University of Texas at Austin

AUSTIN, TEXAS 78712
Leonard Gillman, Chairman
Department of Mathematics

Applications must be filed by February 1, 1971

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (4); geometry and topology (12); analysis and functional analysis (43); probability and statistics (1); computer science and numerical analysis (3); applied mathematics (3). TOTAL 66.

Fellowship (15) 1950-3900 9&12 Fellowship
Teaching Fellowship (4) 3000-3200 9 Teaching Fellowship
Teaching Assistantship (100) 2800-3600 9 50/sem. 20 Teaching Assistantship
Research Assistantship (4) 5520-6780 12 50/sem. 30-40 Research Assistantship
Scholarship (3) 4000-6000 9 50/sem. 20-30 Scholarship
Assistant Instructorship (40)
University of Texas at Austin

AUSTIN, TEXAS 78712
Robert F. Simmons, Acting Chairman
Department of Computer Sciences
Applications must be filed by February 1, 1971

Ph. D. degrees awarded during last three years by field of specialization: logic (1); computer science and numerical analysis (12). TOTAL 13.

Fellowship (6) 2400-2800 9
Teaching Assistantship (18) 2500-4000 9 50-200* 20 Teaching
Research Assistantship (3) 1000-2800 12 50-200 20

*$50 for in state; $200 for out of state.

University of Texas at El Paso

EL PASO, TEXAS 79999
William J. Leahey, Chairman
Department of Mathematics
Applications must be filed by March 1, 1971

Teaching Assistantship (10) 2500 9 6

West Texas State University

CANYON, TEXAS 79015
Hollis L. Cook, Head
Department of Mathematics
Applications must be filed by October 22, 1970

Teaching Assistantship (9) 1080-2880 9 50/sem. 3-9 Teaching

The University of Texas at El Paso
now has a strong program leading to the M. S. degree in mathematics.
The department has 14 Ph.D. staff members representing a variety of fields of specialization, including algebra, analysis, topology and statistics.
A limited number of assistantships is available. Write to:

W. J. Leahey, Chairman
Department of Mathematics
University of Texas at El Paso
El Paso, Texas 79999
<table>
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<th>TYPE of financial assistance (with number anticipated in 1971-1972)</th>
<th>STIPEND amount in dollars</th>
<th>TUITION if not included in stipend (dollars)</th>
<th>SERVICE REQUIRED hours per week type of service</th>
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**Brigham Young University**

PROVO, UTAH 84601  
Kenneth L. Hillam, Chairman  
Department of Mathematics  
Applications must be filed by March 1, 1971

Teaching Assistantship (27)  
500-1325  
9  
10-20  
Teaching, Preparing attending lecture sections

Scholarship (2)  
9  
500

**Brigham Young University**

PROVO, UTAH 84601  
H. Gill Hilton, Chairman  
Department of Statistics  
Applications must be filed by March 1, 1971

Fellowship (1)  
9

Teaching Assistantship (10)  
2300-2700  
9  
375/sem.  
20  
Teaching

**University of Utah**

SALT LAKE CITY, UTAH 84112  
C. E. Burgess, Chairman  
Department of Mathematics  
Applications must be filed by February 15, 1971*

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 (10); computer science and numerical analysis (5). TOTAL 21.

Fellowship (6)  
2400-2800**  
12

Teaching Fellowship (6)  
3000-4000  
12  
2-4  
Teaching

Teaching Assistantship (55)  
3600-4000***  
9  
8  
Teaching

*Offers are made after March 1 until positions are filled.  
**Plus dependent's allowance.  
***$1000-$1200 additional stipend usually available for summer teaching.

**Utah State University**

LOGAN, UTAH 84321  
Lawrence O. Cannon, Head  
Department of Mathematics  
Applications must be filed by March 15, 1971

Teaching Assistantship (20)  
2400-3800  
9  
144/qtr.  
5-10  
Teaching

**Utah State University**

LOGAN, UTAH 84321  
Rex L. Hurst, Head  
Department of Applied Statistics and Computer Science  
Applications must be filed by March 15, 1971

Teaching Assistantship (3)  
2200-3000  
9-12*  
144/qtr. in state  
314/qtr. out of state  
20  
Teaching

*2 assistantships are for 9 months, 1 is for 12 months.
University of Vermont

BURLINGTON, VERMONT 05401
N. James Schoonmaker, Chairman
Department of Mathematics
Applications must be filed by March 1, 1971

Fellowship (5)
Teaching Fellowship (16)*

*Three of these are in our computer center.

College of William and Mary

WILLIAMSBURG, VIRGINIA 23185
Thomas L. Reynolds, Chairman
Department of Mathematics
Applications must be filed by March 15, 1971

Madison College

HARRISONBURG, VIRGINIA 22801
W. M. Sanders, Head
Department of Mathematics
Applications must be filed by April 1, 1971

Radford College

RADFORD, VIRGINIA 24141
Valiant W. Mah, Chairman
Department of Mathematics and Statistics

University of Virginia

CHARLOTTESVILLE, VIRGINIA 22903
Marvin Rosenblum, Chairman
Department of Mathematics
Applications must be filed by February 1, 1971

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (2); geometry and topology (11); analysis and functional analysis (7). TOTAL 20.
University of Virginia

CHARLOTTESVILLE, VIRGINIA 22901
R. H. Owens, Chairman
Department of Applied Mathematics and
Computer Science

Applications must be filed by February 1, 1971

Ph. D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (3); applied mathematics (6). TOTAL 9.

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<td>300-800</td>
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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, 1971

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<th>Type</th>
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Virginia Polytechnic Institute & State University

BLACKSBURG, VIRGINIA 24060
C. Wayne Patty, Head
Department of Mathematics

Applications must be filed by February 1, 1971

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

<table>
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<tr>
<td>Research Assistantship</td>
<td>535</td>
<td>Master's degrees by department 5</td>
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*12 are in Mathematics Education.

GEORGE MASON COLLEGE OF THE UNIVERSITY OF VIRGINIA

ANNOUNCES

MASTER OF SCIENCE IN MATHEMATICS


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

1192
Virginia Polytechnic Institute & State University

BLACKSBURG, VIRGINIA 24061
Boyd Harshbarger, Head
Department of Statistics
Applications must be filed by March 1, 1971

Ph. D. degrees awarded during last three years by field of specialization: probability and statistics (29). TOTAL 29.

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WASHINGTON

Central Washington State College

ELLENSBURG, WASHINGTON 98926
Robert Y. Dean, Chairman
Department of Mathematics
Applications must be filed by February 15, 1971

Teaching Assistantship (6) 275/mo. 9 120 State Res. 20 Teaching

Gonzaga University

SPOKANE, WASHINGTON 99202
Zane C. Motterler, Chairman
Department of Mathematics
Applications must be filed by March 15, 1971

Teaching Assistantship (2) 1800 9 6 Teaching

University of Washington

SEATTLE, WASHINGTON 98105
Ross Beaumont, Chairman
Department of Mathematics
Applications must be filed by March 1, 1971

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (13); geometry and topology (10); logic (5); analysis and functional analysis (12); probability and statistics (3). TOTAL 43.

Fellowship (15) 2400-4100 12
Teaching Assistantship (60) 3420-3960 9 432 6 Teaching
Research Assistantship (15) 3105-3600 9 432 6 Research

University of Washington

SEATTLE, WASHINGTON 98105
Edward Perrin, Chairman
Biomathematics Group
Applications must be filed by February 15, 1971

Ph. D. degrees awarded during last three years by field of specialization: biostatistics (3). TOTAL 3.
Washington State University

PULLMAN, WASHINGTON 99163
Calvin T. Long, Chairman
Department of Mathematics
Applications must be filed by March 1, 1971

Ph.D. degrees awarded during last three years by field of specialization: algebra and number theory (6); geometry and topology (6); analysis and functional analysis (5); probability and statistics (1); applied mathematics (2). TOTAL 20.

<table>
<thead>
<tr>
<th>TYPE</th>
<th>STIPEND</th>
<th>TUITION</th>
<th>SERVICE REQUIRED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Of financial assistance (with number anticipated in 1971-1972)</td>
<td>amount in dollars</td>
<td>9 or 12 mo. in stipend (dollars)</td>
<td>hours per week</td>
</tr>
<tr>
<td>Fellowship (3)</td>
<td>3600</td>
<td>216/sem.</td>
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<tr>
<td>Teaching Assistantship (34)</td>
<td>3400-3600</td>
<td>216/sem.</td>
<td>9</td>
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<tr>
<td>Scholarship, dept. (3)</td>
<td>470</td>
<td>216/sem.</td>
<td>9</td>
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</tbody>
</table>

Washington State University

PULLMAN, WASHINGTON 99163
Ottis W. Rechard, Chairman
Department of Computer Science
Applications must be filed by March 15, 1971

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

<table>
<thead>
<tr>
<th>TYPE</th>
<th>STIPEND</th>
<th>TUITION</th>
<th>SERVICE REQUIRED</th>
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<tbody>
<tr>
<td>Of financial assistance (with number anticipated in 1971-1972)</td>
<td>amount in dollars</td>
<td>9 or 12 mo. in stipend (dollars)</td>
<td>hours per week</td>
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<tr>
<td>Fellowship (8)</td>
<td>2400</td>
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<td>12</td>
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<td>Teaching Assistantship (15)</td>
<td>1712.25-3586.25</td>
<td>216</td>
<td>9</td>
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<tr>
<td>Research Assistantship (25)</td>
<td>1956-3912</td>
<td>216</td>
<td>12</td>
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</tbody>
</table>

Western Washington State College

BELLINGHAM, WASHINGTON 98225
Joseph Hashisaki, Chairman
Department of Mathematics
Applications must be filed by February 15, 1971

Teaching Assistantship (12) 2700 9 120 5 Teaching

WEST VIRGINIA

West Virginia University

MORGANTOWN, WEST VIRGINIA 26506
J. C. Eaves, Chairman
Department of Mathematics

Teaching Fellowship (20) 2000-3600 9 20+ Teaching and assisting

NUMBER OF DEGREES AWARDED IN 1970
Baccalaureate degrees by institution 2085
Baccalaureate degrees by department 59
Master's degrees by department 17

NUMBER OF DEGREES AWARDED IN 1970
Baccalaureate degrees by institution 2085
Baccalaureate degrees by department 59
Master's degrees by department 17

NUMBER OF DEGREES AWARDED IN 1970
Baccalaureate degrees by institution 1575
Baccalaureate degrees by department 51
Master's degrees by department 20

NUMBER OF DEGREES AWARDED IN 1970
Baccalaureate degrees by institution 2125
Baccalaureate degrees by department 30
Master's degrees by department 15

1194
### Marquette University

**MILWAUKEE, WISCONSIN 53233**

C. C. Braunschweiger, Chairman  
Department of Mathematics

Applications must be filed by March 1, 1971

<table>
<thead>
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<th>TYPE</th>
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<td>of financial assistance (with number anticipated in 1971-1972)</td>
<td>amount</td>
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<td></td>
<td></td>
<td>12 mo.</td>
<td>in dollars</td>
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</tr>
<tr>
<td>Teaching Assistantship (14)</td>
<td>2400-2800</td>
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<td>Teaching</td>
</tr>
<tr>
<td>Research Assistantship (2)</td>
<td>2400-2600</td>
<td>9</td>
<td>Teaching and/or research</td>
</tr>
<tr>
<td>NSF Traineeship (1)</td>
<td>2400-2800</td>
<td>12</td>
<td>Teaching and research</td>
</tr>
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</table>

WISCONSIN

### University of Wisconsin

**MADISON, WISCONSIN 53706**

Wolfgang Wasow, Chairman  
Department of Mathematics

Applications must be filed by January 15, 1971

<table>
<thead>
<tr>
<th>TYPE</th>
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<td>9 or</td>
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<td></td>
<td>12 mo.</td>
<td>in dollars</td>
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<tr>
<td>Fellowship (20)</td>
<td>2800-3100</td>
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<td>half time Teaching</td>
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<td>2700-3300</td>
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<td>half time Research</td>
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<tr>
<td>Research Assistantship (15)</td>
<td>3000</td>
<td>9</td>
<td></td>
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<tr>
<td>MRC Regular (5)</td>
<td>2400-2800*</td>
<td>12</td>
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<tr>
<td>MRC R. E. Langer (2)</td>
<td>3400-3600*</td>
<td>12</td>
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</table>

*Plus $500 for each dependent.

### University of Wisconsin

**MADISON, WISCONSIN 53706**

George Collins, Chairman  
Department of Computer Sciences

Applications must be filed by January 15, 1971

<table>
<thead>
<tr>
<th>TYPE</th>
<th>STIPEND</th>
<th>TUITION</th>
<th>SERVICE REQUIRED</th>
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<tr>
<td></td>
<td>of financial assistance (with number anticipated in 1971-1972)</td>
<td>amount</td>
<td>9 or</td>
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<td></td>
<td></td>
<td>12 mo.</td>
<td>in dollars</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellowship (5)</td>
<td>2700-3400</td>
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<td>15</td>
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<tr>
<td>Teaching Fellowship (23)</td>
<td>2356-2464</td>
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<td>20</td>
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<tr>
<td>Teaching Assistantship (20)</td>
<td>3294-3468</td>
<td>9</td>
<td>410</td>
</tr>
<tr>
<td>Research Assistantship (25)</td>
<td>2985</td>
<td>9</td>
<td>410</td>
</tr>
<tr>
<td>Traineeship (8)</td>
<td>2400-3000*</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>MRC Fellowship (4-6)</td>
<td>2400-2800*</td>
<td>12</td>
<td></td>
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<tr>
<td>Project Assistantship (10)</td>
<td>individually arranged</td>
<td>410</td>
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</table>

*Plus $500 allowance for each dependent.

### University of Wisconsin

**MADISON, WISCONSIN 53706**

J. Barkley Rosser, Director  
Mathematics Research Center

Applications must be filed by January 15, 1971

<table>
<thead>
<tr>
<th>TYPE</th>
<th>STIPEND</th>
<th>TUITION</th>
<th>SERVICE REQUIRED</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>of financial assistance (with number anticipated in 1971-1972)</td>
<td>amount</td>
<td>9 or</td>
</tr>
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<td></td>
<td></td>
<td>12 mo.</td>
<td>in dollars</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Fellowship (10)</td>
<td>2400-2800*</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>R. E. Langer Fellowship (2)</td>
<td>3400-3800*</td>
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</table>

*Stipends increased by $500 for each dependent.
University of Wisconsin-Milwaukee

MILWAUKEE, WISCONSIN 53201
Edmund H. Feller, Chairman
Department of Mathematics
Applications must be filed by February 15, 1971

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>Type of financial assistance (with number anticipated in 1971-1972)</th>
<th>Stipend amount in dollars</th>
<th>9 or 12 mo.</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>Fellowship (15)</td>
<td>2400-2800</td>
<td>12</td>
<td></td>
<td>9</td>
<td>Research</td>
</tr>
<tr>
<td>Teaching Fellowship (10)</td>
<td>2600-3000</td>
<td>12</td>
<td></td>
<td>9</td>
<td>Research</td>
</tr>
<tr>
<td>Teaching Assistantship (70)</td>
<td>3294-3559</td>
<td>9</td>
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<td>6</td>
<td>Teaching</td>
</tr>
<tr>
<td>Research Assistantship (1)</td>
<td>3648</td>
<td>12</td>
<td></td>
<td>9</td>
<td>Research</td>
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<tr>
<td>Scholarship (5)</td>
<td></td>
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<td></td>
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</table>

Tuition is $232 for full-time residents and $818 for non-residents.

Wisconsin State University, Eau Claire

EAU CLAIRE, WISCONSIN 54701
Lawrence Wahlstrom, Chairman
Department of Mathematics
Applications must be filed by March 1, 1971

<table>
<thead>
<tr>
<th>Type of financial assistance (with number anticipated in 1971-1972)</th>
<th>Stipend amount in dollars</th>
<th>9 or 12 mo.</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 (1)</td>
<td>500</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scholarship (2)</td>
<td>400</td>
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<td></td>
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<tr>
<td>Graduate Assistantship (1)</td>
<td>2500</td>
<td>9</td>
<td></td>
<td>20</td>
<td>Assisting</td>
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</table>

*Not allowed to teach in the WSU system.

Wisconsin State University, La Crosse

LA CROSSE, WISCONSIN 54601
Arnold L. Tente, Chairman
Department of Mathematics
Applications must be filed by March 1, 1971

<table>
<thead>
<tr>
<th>Type of financial assistance (with number anticipated in 1971-1972)</th>
<th>Stipend amount in dollars</th>
<th>9 or 12 mo.</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>Graduate Assistantship* (1)</td>
<td>2500</td>
<td>9</td>
<td></td>
<td>20</td>
<td>Assisting</td>
</tr>
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</table>

Wisconsin State University, River Falls

RIVER FALLS, WISCONSIN 54022
Lillian Gough, Chairman
Department of Mathematics

<table>
<thead>
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<th>Type of financial assistance (with number anticipated in 1971-1972)</th>
<th>Stipend amount in dollars</th>
<th>9 or 12 mo.</th>
<th>Tuition if not included in stipend (dollars)</th>
<th>Service Required hours per week</th>
<th>Type of service</th>
</tr>
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<tbody>
<tr>
<td>Teaching Assistantship (5-10)</td>
<td>2000-2500</td>
<td>9</td>
<td></td>
<td>157/qtr.</td>
<td>Teaching</td>
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</tbody>
</table>

Wisconsin State University, Whitewater

WHITewater, WISCONSIN 53190
Carroll E. Flanagan, Chairman
Department of Mathematics

<table>
<thead>
<tr>
<th>Type of financial assistance (with number anticipated in 1971-1972)</th>
<th>Stipend amount in dollars</th>
<th>9 or 12 mo.</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>Graduate Assistantship</td>
<td>2500</td>
<td>2 sem.</td>
<td>225 resident</td>
<td>20</td>
<td>Grading papers, helping students, etc.</td>
</tr>
</tbody>
</table>
University of Wyoming

LARAMIE, WYOMING 82070
W. Norman Smith, Head
Department of Mathematics
Applications must be filed by March 1, 1971

Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (3); applied mathematics (1). TOTAL 4.

Teaching Assistantship (24) 2888-3861 9 6-8 Teaching
Traineeship (2) usual

CANADA

Carleton University

OTTAWA, ONTARIO, CANADA
D. W. Sida, Chairman
Department of Mathematics
Applications must be filed by March 1, 1971

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

Fellowship (2) 4200-4800 12 441 4 Teaching
Teaching Fellowship (4) 3300-4400 12 441 4 Teaching
Teaching Assistantship (15) 2700-3600 12 441 8 Teaching
Research Assistantship (10) 3000 12 441
Scholarship (4) 3000-4500 12 441

Dalhousie University

HALIFAX, NOVA SCOTIA, CANADA
A. J. Tingley, Chairman
Department of Mathematics

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

Teaching Assistantship (25) 1600-5000 12 600 3-6
Scholarship (3) 2500-5000 12 600

Lakehead University

THUNDER BAY, ONTARIO, CANADA
Clement F. Kent, Chairman
Department of Mathematics
Applications must be filed by August 1971

Teaching Assistantship (6) 3600 12 500 10
**McGill University**

**NUMBER OF DEGREES AWARDED IN 1970**

- Baccalaureate degrees by institution: 1330
- Baccalaureate degrees by department: 70
- Master's degrees by department: 11

Ph.D. degrees awarded during last three years by field of specialization:
- algebra and number theory (8);
- geometry and topology (3);
- analysis and functional analysis (4);
- probability and statistics (4);
- applied mathematics (1).

**TOTAL 20.**

<table>
<thead>
<tr>
<th>Position</th>
<th>Stipend amount</th>
<th>Hours per week</th>
<th>Type of Service</th>
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<tbody>
<tr>
<td>Fellowship (5)</td>
<td>2000–3500</td>
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<tr>
<td>Postdoctoral Fellowship (5)</td>
<td>6000–7200</td>
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<tr>
<td>Teaching Assistantship (25)</td>
<td>2500–5000</td>
<td>8</td>
<td>3 or 6</td>
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<tr>
<td>Research Assistantship (40)</td>
<td>2600–3000</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>Demonstrators (60)</td>
<td>425–1500</td>
<td>7</td>
<td>3 or 6</td>
</tr>
</tbody>
</table>

**McMaster University**

**NUMBER OF DEGREES AWARDED IN 1970**

- Baccalaureate degrees by institution: 1303*
- Baccalaureate degrees by department: 35**
- Master's degrees by department: 7

Ph.D. degrees awarded during last three years by field of specialization:
- algebra and number theory (7);
- matroid theory (1);
- lattice theory (1);
- graph theory (2).

**TOTAL 11.**

<table>
<thead>
<tr>
<th>Position</th>
<th>Stipend amount</th>
<th>Hours per week</th>
<th>Type of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching Assistantship (15)</td>
<td>3600–4800</td>
<td>about 400</td>
<td>8–10</td>
</tr>
</tbody>
</table>

*Fall 1969 and Spring 1970.
**22 pass B. Sc., 2 Major B. Sc. and 11 Honours B. Sc. degrees; Fall 1969 and Spring 1970.

---

**McMaster University**

**HAMILTON · ONTARIO · CANADA**

Position available from July 1st, 1971 for a Statistician at the Associate or Full Professor level tenable in either the Department of Mathematics or the Department of Applied Mathematics or in both as a joint appointment depending upon the area of specialization of the candidate.

Experience in supervising graduate students is expected.

Salary depends upon the qualifications and experience. Present (1970-71) minimum salary levels (exclusive of summer research stipend) for the Associate Professor: $13,700; for the Full Professor: $17,500. Usual health, group life and pension benefits are available.

Curriculum Vitae, list of publications and names of at least three referees should be sent to —

DEAN D. R. McCALLA, Faculty of Science

**McMaster University**

**HAMILTON, ONTARIO, CANADA**
**Memorial University of Newfoundland**

ST. JOHN'S, NEWFOUNDLAND, CANADA  
W. J. Blundon, Chairman  
Department of Mathematics  
Applications must be filed by September 1, 1971

<table>
<thead>
<tr>
<th>Type of financial assistance</th>
<th>Stipend amount</th>
<th>Tuition if not included</th>
<th>Service required hours per week</th>
<th>Type of service</th>
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<tbody>
<tr>
<td>Fellowship (8)</td>
<td>3000-3600</td>
<td>12</td>
<td>500</td>
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</table>

**Queen's University at Kingston**

KINGSTON, ONTARIO, CANADA  
A. J. Coleman, Head  
Department of Mathematics  
Applications must be filed by March 1, 1971

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 (1).  **TOTAL 5.**

<table>
<thead>
<tr>
<th>Type of financial assistance</th>
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<th>Tuition if not included</th>
<th>Service required hours per week</th>
<th>Type of service</th>
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<tbody>
<tr>
<td>Fellowship (2)</td>
<td>3600</td>
<td>12</td>
<td>435</td>
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<tr>
<td>Teaching Fellowship (30)</td>
<td>2750-3800</td>
<td>10-12</td>
<td>435</td>
<td>10</td>
</tr>
<tr>
<td>Teaching Assistantship (20)</td>
<td>1200-1800</td>
<td>10-12</td>
<td>435</td>
<td>10</td>
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</table>

**Simon Fraser University**

BURNABY 2, B.C., CANADA  
E. M. Shoemaker, Acting Head  
Department of Mathematics  
Applications must be filed by March 15, 1971

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

<table>
<thead>
<tr>
<th>Type of financial assistance</th>
<th>Stipend amount</th>
<th>Tuition if not included</th>
<th>Service required hours per week</th>
<th>Type of service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching Assistantship (20)</td>
<td>2530-2970</td>
<td>8*</td>
<td>150/sem. **</td>
<td>15</td>
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<tr>
<td>Scholarship (5)</td>
<td>3800</td>
<td>12</td>
<td>150/sem. **</td>
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</table>

*Many extendable to 12 months with $1000 research assistantship.  **Fees reduce to $20/sem. during second year of graduate studies.

**Université Laval**

QUÉBEC 10, QUÉBEC, CANADA  
Norbert Lacroix, Director  
Department of Mathematics  
Applications must be filed by May 1, 1971

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

<table>
<thead>
<tr>
<th>Type of financial assistance</th>
<th>Stipend amount</th>
<th>Tuition if not included</th>
<th>Service required hours per week</th>
<th>Type of service</th>
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<tr>
<td>Teaching Assistantship (20)</td>
<td>1500-2700</td>
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<td>500</td>
<td>3-6</td>
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<tr>
<td>Research Assistantship (12)</td>
<td>1000-3000</td>
<td>9</td>
<td>500</td>
<td>up to 20</td>
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<tr>
<td>Scholarship (10)</td>
<td>2000-3500</td>
<td>9</td>
<td>500</td>
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</table>
### Université de Montréal

**MONTREAL, QUÉBEC, CANADA**

<table>
<thead>
<tr>
<th>TYPE of financial assistance</th>
<th>STIPEND</th>
<th>TUITION if not included</th>
<th>SERVICE REQUIRED</th>
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<tr>
<td>-number anticipated in 1971-1972</td>
<td>amount in dollars</td>
<td>9 or 12 mo. in stipend (dollars)</td>
<td>hours per week type of service</td>
</tr>
</tbody>
</table>

- **Number of Degrees Awarded in 1970**
  - Baccalaureate degrees by institution: 200
  - Baccalaureate degrees by department: 90
  - Master's degrees by department: 26

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 (4); probability and statistics (1).

TOTAL 8.

<table>
<thead>
<tr>
<th>Fellowship (32)</th>
<th>Amount: 3000-3600*</th>
<th>12 hours</th>
<th>495</th>
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<tbody>
<tr>
<td>Teaching Fellowship (30)</td>
<td>Amount: 2000-7000*</td>
<td>12 hours</td>
<td>495</td>
</tr>
<tr>
<td>Teaching Assistantship (77)</td>
<td>Amount: 1200-2200*</td>
<td>9 hours</td>
<td>495</td>
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<tr>
<td>Research Assistantship (5)</td>
<td>Amount: 2000-3600*</td>
<td>12 hours</td>
<td>25</td>
</tr>
<tr>
<td>Scholarship (14)</td>
<td>Amount: 1500-3000*</td>
<td>varies</td>
<td>495</td>
</tr>
<tr>
<td>Work Outside (9)</td>
<td>varies</td>
<td>495</td>
<td></td>
</tr>
</tbody>
</table>

*Students can accumulate both types of financial assistance, e.g., teaching assistantship plus scholarship; maximum $5,000.

### Université de Sherbrooke

**SHERBROOKE, QUÉBEC, CANADA**

<table>
<thead>
<tr>
<th>TYPE of financial assistance</th>
<th>STIPEND</th>
<th>TUITION if not included</th>
<th>SERVICE REQUIRED</th>
</tr>
</thead>
<tbody>
<tr>
<td>-number anticipated in 1971-1972</td>
<td>amount in dollars</td>
<td>9 or 12 mo. in stipend (dollars)</td>
<td>hours per week type of service</td>
</tr>
</tbody>
</table>

| Teaching Fellowship (3) | Amount: 600-1200 | 9 hours | 550 |
| Teaching Assistantship (1) | Amount: 2000-4000 | 9 hours | 3-6 |
| Research Assistantship (1) | Amount: 2000-4000 | 9 hours | 3-6 |

*For Faculty of Sciences only.

### University of Alberta

**EDMONTON, ALBERTA, CANADA**

<table>
<thead>
<tr>
<th>TYPE of financial assistance</th>
<th>STIPEND</th>
<th>TUITION if not included</th>
<th>SERVICE REQUIRED</th>
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<tbody>
<tr>
<td>-number anticipated in 1971-1972</td>
<td>amount in dollars</td>
<td>9 or 12 mo. in stipend (dollars)</td>
<td>hours per week type of service</td>
</tr>
</tbody>
</table>

| Post-Doctoral Fellowship (10) | Amount: 6000-7560* | 12 hours | 3-4 Teaching |
| Graduate Teaching Assistance (40) | Amount: 1800-3600 | 8 hours | Teaching or Problem Supervision |
| Graduate Research Assistantship (10) | Amount: 2500-3180 | 12 hours | 500 Research |

*Tax free.
**Students are often eligible for summer assistantships of $1,000.
***Graduate Research Assistants may receive supplementary teaching up to the equivalent of 1/3 of a G.T.A.
University of Alberta

EDMONTON, ALBERTA, CANADA
D. B. Scott, Chairman
Department of Computing Science
Applications must be filed by March 15, 1971

<table>
<thead>
<tr>
<th>Type of Financial Assistance</th>
<th>Stipend</th>
<th>Tuition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching Assistantship (10)</td>
<td>2400–3000</td>
<td>8</td>
</tr>
<tr>
<td>Research Assistantship (5)</td>
<td>2400–2800</td>
<td>12</td>
</tr>
</tbody>
</table>

University of British Columbia

VANCOUVER 8, B. C., CANADA
R. D. James, Head
Department of Mathematics
Applications must be filed by March 15, 1971

<table>
<thead>
<tr>
<th>Type of Financial Assistance</th>
<th>Stipend</th>
<th>Tuition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fellowship (30)</td>
<td>2500–3600</td>
<td>12</td>
</tr>
<tr>
<td>Teaching Assistantship (75)</td>
<td>1500–3000</td>
<td>8</td>
</tr>
</tbody>
</table>

THE UNIVERSITY OF ALBERTA

Graduate Study in Mathematics
to the M.Sc. or Ph.D. degree

**FIELDS:** Algebra, Approximation Theory, Classical Analysis, Control Theory, Combinatorics and Graph Theory, Differential Equations, Functional Analysis, Mathematical Statistics, Number Theory, Relativity, Topology.

**TEACHING ASSISTANTSHIPS:** $1800 to $3600 for 8 months. Fees are waived. In addition students may receive an additional $1000 while continuing their work on campus during the summer months.

**RESEARCH ASSISTANTSHIPS:** Support of $3000 for 12 months. In addition students may receive $800 to $1000 as part time teaching assistants.

**APPLY:** Prof. J. R. McGregor, Chairman
Department of Mathematics
The University of Alberta
Edmonton, Alberta, Canada

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*Dollars*
Congratulations to the students who have been awarded streptococcal type B vaccine for the 2021-2022 academic year. The Department of Immunology and Infectious Diseases at the University of Alberta has selected the following students for their outstanding contributions to the field of immunology.

**Selected Students**: 
- **Name**: John Doe  
- **Research Area**: Bacterial Pathogenesis  
- **Award**: Streptococcal Type B Vaccine  
- **Duration**: 1 year  
- **Supervisor**: Dr. Jane Smith  
- **Department**: Department of Immunology and Infectious Diseases

The selection process was based on a rigorous review of each student's research proposal and their potential contributions to the field. Congratulations to all the selected students, and we look forward to seeing their progress in the upcoming academic year.
University of Guelph

GUELPH, ONTARIO, CANADA
T. D. Newton, Chairman
Department of Mathematics and Statistics
Applications must be filed by May 31, 1971

Teaching Assistantship (5) 3500 12 10
Research Assistantship (2) 3500 12 10

University of Manitoba

WINNIPEG 19, MANITOBA, CANADA
N. S. Mendelsohn, Head
Department of Mathematics
Applications must be filed by March 1, 1971

Teaching Assistantship (10) 1600–2400 400–450 6
Research Assistantship (8) 1600–2400 400–450 6

University of New Brunswick

FREDERICTON, NEW BRUNSWICK, CANADA
Brian O. J. Tupper, Head
Department of Mathematics
Ph. D. degrees awarded during last three years by field of specialization: algebra and number theory (1).
TOTAL 1.

Fellowship (10) 2500–3300 12 500 6 Teaching or Research
Teaching Assistantship (7) 2800–3300 9 or 12 500 8 Teaching
Research Assistantship (3) 2000–3000 9 or 12 500 Research

University of New Brunswick

FREDERICTON, NEW BRUNSWICK, CANADA
W. Dana Wasson, Head
Department of Computer Science
Applications must be filed by February 28, 1971

Teaching Fellowship (3) 1600–2500 8 500 8
Teaching Assistantship (6) 1600–2500 8 500 8
Scholarship (2) 2000 8 500 8

1203
**University of Ottawa**

**OTTAWA, ONTARIO, CANADA**

R. G. Tross, Acting Head
Department of Mathematics
Applications must be filed by March 15, 1971

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

<table>
<thead>
<tr>
<th>Type</th>
<th>Stipend</th>
<th>Tuition</th>
<th>Service Required</th>
</tr>
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<tbody>
<tr>
<td>Fellowship (3)</td>
<td>3000–3600</td>
<td>447</td>
<td>12 mo.</td>
</tr>
<tr>
<td>Teaching Assistantship (2)</td>
<td>2000–3000</td>
<td>447</td>
<td>9</td>
</tr>
<tr>
<td>Problem classes, marking (15)</td>
<td>2000–2500</td>
<td>447</td>
<td>9</td>
</tr>
</tbody>
</table>

**University of Saskatchewan**

**SASKATOON, SASKATCHEWAN, CANADA**

G. H. M. Thomas, Head
Department of Mathematics
Applications must be filed by March 15, 1971

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

<table>
<thead>
<tr>
<th>Type</th>
<th>Stipend</th>
<th>Tuition</th>
<th>Service Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fellowship (9)</td>
<td>2500–3500</td>
<td>425</td>
<td>12 mo.</td>
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<tr>
<td>Teaching Fellowship (2)</td>
<td>4500</td>
<td>425</td>
<td>12 mo.</td>
</tr>
<tr>
<td>Teaching Assistantship (6)</td>
<td>3000–3000</td>
<td>425</td>
<td>12 mo.</td>
</tr>
</tbody>
</table>

**University of Saskatchewan, Regina**

**REGINA, SASKATCHEWAN, CANADA**

C. L. Kaller, Chairman
Department of Mathematics
Applications must be filed by March 15, 1971

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

<table>
<thead>
<tr>
<th>Type</th>
<th>Stipend</th>
<th>Tuition</th>
<th>Service Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching Fellowship (3)</td>
<td>4000</td>
<td>425</td>
<td>12 mo.</td>
</tr>
<tr>
<td>Teaching Assistantship (3)</td>
<td>3000</td>
<td>425</td>
<td>12 mo.</td>
</tr>
<tr>
<td>NRC (6)*</td>
<td>2000–3000</td>
<td>425</td>
<td>12 mo.</td>
</tr>
</tbody>
</table>

*These are from NRC operating grants to staff members who then support graduate students as their own research assistants.

**University of Toronto**

**TORONTO, ONTARIO, CANADA**

G. F. D. Duff, Chairman
Department of Mathematics
Applications must be filed by March 15, 1971

Ph. D. degrees awarded during last three years by field of specialization: geometry and topology (4); analysis and functional analysis (14); probability and statistics (10); computer science and numerical analysis (1); applied mathematics (4). TOTAL 33.

<table>
<thead>
<tr>
<th>Type</th>
<th>Stipend</th>
<th>Tuition</th>
<th>Service Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fellowship (55)</td>
<td>3000–5600</td>
<td>475</td>
<td>12 mo.</td>
</tr>
<tr>
<td>Teaching Assistantship (30)</td>
<td>2600–3000</td>
<td>475</td>
<td>8</td>
</tr>
<tr>
<td>Scholarship (5)</td>
<td>3000–5600</td>
<td>475</td>
<td>12 mo.</td>
</tr>
</tbody>
</table>
University of Toronto

TORONTO, ONTARIO, CANADA

Thomas E. Hull, Chairman
Department of Computer Science

Applications must be filed by March 15, 1971

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

- Fellowship (27) 3000-5000 12 475
- Teaching Fellowship (2) 3500-5000 12 350 4 Teaching
- Teaching Assistantship (40) 3300-3650 12 350 4 Tutoring
- Research Assistantship (11) 3300-3600 12 350 4 Demonstrating

University of Victoria

VICTORIA, BRITISH COLUMBIA, CANADA

S. G. Ghurye, Chairman
Department of Mathematics

Applications must be filed by February 21, 1971

- Fellowship (2) 3500 12 450
- Teaching Assistantship (2) 3500 12 450 6 Teaching
- Research Assistantship (3) 3180 12 450 10 Research
- Scholarship (3) 1000 9

University of Waterloo

WATERLOO, ONTARIO, CANADA

G. D. Lawson, Associate Dean
Faculty of Mathematics

Applications must be filed by April 15, 1971

Ph. D. degrees awarded during last three years by field of specialization: analysis and functional analysis (3); probability and statistics (3); computer science and numerical analysis (4); applied mathematics (4); combinatorics (6). TOTAL 20.

- Post-Doctoral Fellowship (11) 6000-7200 12 474 5-10 Teaching, marking
- Teaching Fellowship (199) 1000-3000 4/8/12 474 4-10 Research, technical assistance
- Research Assistantship (20) 1000-3000 4/8/12 150.95/term 5-10 Research Assistance
- Scholarship (95) 1500-3600 8/12 474

University of Waterloo

WATERLOO, ONTARIO, CANADA

D. D. Cowan, Chairman
Department of Applied Analysis and Computer Science

Applications must be filed by April 15, 1971

Ph. D. degrees awarded during last three years by field of specialization: computer science and numerical analysis (4). TOTAL 4.

- Teaching Fellowship (85) 1000-3000 4, 8, 12 150.95/term 5-10 Teaching & Tutoring
- Research Assistantship (30) 1000-3000 4, 8, 12 150.95/term 4-10 Research Assistance
- Scholarship (28) 150.95/term
<table>
<thead>
<tr>
<th>TYPE of financial assistance (with number anticipated in 1971-1972)</th>
<th>STIPEND</th>
<th>TUITION</th>
<th>SERVICE REQUIRED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>amount</td>
<td>if not included</td>
<td>hours per week</td>
</tr>
<tr>
<td></td>
<td>in dollars</td>
<td>in stipend (dollars)</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>University of Western Ontario</th>
</tr>
</thead>
<tbody>
<tr>
<td>LONDON 73, ONTARIO, CANADA</td>
</tr>
<tr>
<td>D. Borwein, Head</td>
</tr>
<tr>
<td>Department of Mathematics</td>
</tr>
</tbody>
</table>

Ph. D. degrees awarded during last three years by field of specialization: analysis and functional analysis (4); probability and statistics (1); computer science and numerical analysis (1). TOTAL 6.

- Fellowship (11) 2200–3500 8 133.50/term 1 Tutoring
- Teaching Assistantship (10) 500 8 133.50/term Tutoring
- Research Assistantship (5) 3000 12 133.50/term Research
- Scholarship (9) 1500–3600 8–12 133.50/term

<table>
<thead>
<tr>
<th>University of Western Ontario</th>
</tr>
</thead>
<tbody>
<tr>
<td>LONDON 73, ONTARIO, CANADA</td>
</tr>
<tr>
<td>J. H. Blackwell, Head</td>
</tr>
<tr>
<td>Department of Applied Mathematics</td>
</tr>
</tbody>
</table>

Ph. D. degrees awarded during last three years by field of specialization: applied mathematics (2). TOTAL 2.

- OGF Fellowship (3) 2250 12 133.50/term Tutoring, Marking
- Teaching Fellowship (1) 3000 12 133.50/term Tutoring, Marking
- Teaching Assistantship (7) 2200–2700 8 133.50/term Tutoring, Marking
- Research Assistantship 500–3000 12 133.50/term Research
- NRC Scholarship (7) 3000–6000 12 133.50/term

<table>
<thead>
<tr>
<th>University of Windsor</th>
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<tbody>
<tr>
<td>WINDSOR 11, ONTARIO, CANADA</td>
</tr>
<tr>
<td>Donald T. Faught, Head</td>
</tr>
<tr>
<td>Department of Mathematics</td>
</tr>
</tbody>
</table>

Applications must be filed by April 1, 1971

Ph. D. degrees awarded during last three years by field of specialization: geometry and topology (2); probability and statistics (1); applied mathematics (3). TOTAL 6.

- Fellowship (10) 2400 12 470 6–7 Presiding at Tutorials
- Teaching Fellowship (2) 3000–3600 12 470 6–7 Teaching
- Teaching Assistantship (10) 3000–3600 12 470 6–7 Demonstrating

<table>
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<tr>
<th>York University</th>
</tr>
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<tbody>
<tr>
<td>DOWNSVIEW, TORONTO 463, ONTARIO, CANADA</td>
</tr>
<tr>
<td>D. Solitar, Chairman</td>
</tr>
<tr>
<td>Department of Mathematics</td>
</tr>
</tbody>
</table>

Applications must be filed by February 15, 1971

| Teaching Assistantship (15) 2600–3500 9–12 525 5–10 Teaching |
| Research Assistantship (3) 2600–3500 9–12 525 5–10 Research |

1206
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.
TO WHOM IT MAY CONCERN:

During the calendar year 19__________ served as a
__________________________ in the Department of _______________ at the _______________
(position)
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 ____________________,
which is not required for the degree, and (b) _________ percent of his time on degree re-
quirements. The research or study which he performed under (b) met in part the require-
ments 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 Informa-
tion 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
one hundred copies.
SELECTED LIST OF STIPENDS

I. Graduate Fellowships and Loan Sources

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 Analyzes. 1971 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 Analyzes, 1401 Wilson Boulevard, Arlington, Virginia 22209.

Danforth Foundation. Graduate Fellowships. Citizenship unrestricted. Open to men and women under 30 years of age who are seniors or recent graduates of accredited colleges in the United States, with no previous graduate study, and who intend to teach at the college level. Tenable at any accredited U. S. university. Must be nominated by liaison officer of college or university. See the liaison officer on campus or, for general information, write to Dr. John H. Chandler, Director, Graduate Fellowship Program, The Danforth Foundation, 222 South Central Avenue, St. Louis, Missouri 63105.

Danforth Foundation. Kent Fellowships. Purpose is to encourage and support persons who are preparing for teaching or administration in colleges and universities. Open to men and women to age 40. A minimum of one year of previous graduate study is required at the time of application. Fields unrestricted. A maximum of 50 awards are made. Information is available by writing to Director, Kent Program, The 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, 1285 Boston Avenue, Bridgeport, Connecticut 06602.


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 $7,500 to $12,000 annually. Write to Scientific Education Office, Hughes Aircraft Company, P. O. Box 90515, Los Angeles, California 90009.

Humanities Fund, Inc. A Boris A. Bakhthmeteff Research Fellowship will be available for the 1971-72 academic year in an amount up to $3,600. 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, 1971, 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 M.S., 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. 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.
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 Financial Aid, Office of Education, Department of Health, Education, and Welfare, Washington, D. C. 20202.

National Science Foundation. Graduate Fellowships. Application may be made by college seniors and graduate students working in a degree program. All applicants must be citizens of the United States. Annual stipends are $2,400 for the first-year level, $2,600 for the intermediate level, and $2,800 for the terminal-year level. Dependency allowances and allowances for tuition, fees, and limited travel will also be provided. Further information and application materials may be obtained from the Fellowship Office, National Research Council, 2101 Constitution Avenue, N. W., Washington, D. C. 20415. Applications are due November 30, 1970.

National Science Foundation. Graduate Traineeships. For 9- or 12-month study programs leading to the master's or doctor's degree. Summer traineeships will also be available for graduate teaching assistants to enable them to continue their studies during the summer on a full-time basis. Trainees must be U. S. citizens or nationals. Trainees are selected by the institution at which graduate study is to be undertaken, and application must be made to the university. Further information and a list of participating institutions may be obtained from the Graduate Traineeship Program, Division of Graduate Education in Science, National Science Foundation, Washington, D. C. 20550.

Oak Ridge Graduate Fellowship Program. Opportunity for graduate students working toward doctoral degrees in scientific fields, including mathematics, to use AEC installations at Oak Ridge, Savannah River Laboratory, Savannah River Ecology Laboratory, and Puerto Rico Nuclear Center for thesis research. U. S. citizenship is required. About 25 fellowships are awarded annually. Inquiries may be addressed to University Programs Office, Oak Ridge Associated Universities, Post Office Box 17, Oak Ridge, Tennessee 37830.


Radio Corporation of America. Fellowships. Grants are for graduate study in biomedical engineering, 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.

Shell Merit Residencies. Nine-month or twelve-month residencies at Cornell and Stanford Universities; primarily for high school teachers of science and mathematics who have been Shell Merit Fellows. For information write to Coordinator, Shell Merit Programs, Room 19, Stone Hall, Cornell University, Ithaca, New York 14850, or to Dr. Paul DeHart Hurd, Coordinator, Shell Merit Programs, School of Education, Stanford University, Stanford, California 94305.

Sigma Delta Epsilon Grant-in-Aid. This award, to be given annually by Sigma Delta Epsilon, Graduate Women's Scientific Fraternity, 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 Dr. Marjorie M. Nemes, Chairman, Sigma Delta Epsilon Fellowship Board, Merck Institute for Therapeutic Research, West Point, Pennsylvania 19486. Applications should be submitted before February 1, 1971. Announcement of recipients will be made April 1, 1971.
Smithsonian Institution. Visiting Research Associateships. 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, 1971. Further information and application forms may be obtained from the Division of Graduate Studies, Academic Programs, Smithsonian Institution, Washington, D. C. 20560.

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 1971, is $15,300 including generous staff benefits. Teaching load will total two one-semester courses during the 12-month period. Instructors must have completed all requirements for the Ph. D. by September 1, 1971. Each applicant should prepare both 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 the Chairman, Department of Mathematics, SUNY at Buffalo, 4246 Ridge Lea Road, Amherst, New York 14226, so as to arrive by January 15, 1971. Appointments will be announced by February 15.

U. S. Department of Health, Education, and Welfare, National Defense Graduate Fellowship Program. Limited to specified universities. Applicant must have earned a bachelor's degree, intend to enroll in a full-time doctorate program, and signify an interest in a college teaching career. Fellowships are usually three-year awards. Application is made directly to the university at which the student intends to study. For general information write to the Graduate Academic Programs Branch, Division of University Programs, Bureau of Higher Education, Office of Education, U. S. Department of Health, Education, and Welfare, Washington, D. C. 20202.

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 20201.

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., 800 Grant Street, Pittsburgh, Pennsylvania 15230.

Woodrow Wilson National Fellowship Foundation. To attract outstanding men and women to the academic profession, the Foundation will award Woodrow Wilson Fellowships for first year graduate study to approximately 250 American and 50 Canadian students. In addition, it will recommend to graduate schools 800 finalists who merit consideration for financial assistance. Eligible are students in the humanities and social sciences, and those in the natural sciences and mathematics who demonstrate a clear interest in college teaching. A candidate must be nominated by a faculty member no later than October 30, 1970. For further information, write to the National Director, Woodrow Wilson Fellowship Foundation, Box 642, Princeton, New Jersey 08540.

Woodrow Wilson National Fellowship Foundation. Black veterans of the armed services who plan to begin graduate and professional training in preparation for careers of service to the nation and their communities may apply for Martin Luther King, Jr., Fellowships. The veteran's G. I. benefits will be augmented for a period up to two academic years to provide a monthly stipend which is a realistic financial alternative to full-time employment. In addition, most graduate and professional schools waive tuition and fees for King Fellows. Candidates in any appropriate academic or professional field who expect to enroll in a graduate level school in the fall of 1971 are eligible. For further information, write to the National Director, Woodrow Wilson Fellowship Foundation, Box 642, Princeton, New Jersey 08540.

Zonta International. Amelia Earhart Fellowships. For women holding a bachelor's degree in science and interested in graduate work in aero-space and related sciences. Recipients will be granted $3,000, and past recipients may apply for renewed grants. Write to Zonta International, 59 East Van Buren Street, Chicago, Illinois 60605.

II. Postdoctoral Awards

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,
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 Applicants should state in some detail their field of specialization. Annual stipend for performing arts, to be used abroad or in the United States. Applicants must hold a doctorate or its equivalent in scholarly achievement or have fulfilled all requirements for the doctorate, except the dissertation, by July 1 preceding the fellowship year. Preference given to dissertation year applicants. Deadline for application is December 1. Write to Fellowships Office, AAUW Educational Foundation, 2401 Virginia Avenue, N.W., Washington, D. C. 20037.

American Association of University Women Educational Foundation. Fifty research fellowships for American women, unrestricted as to age or field, except that awards are not made in the creative or performing arts, to be used abroad or in the United States. Applicants must hold a doctorate or its equivalent in scholarly achievement or have fulfilled all requirements for the doctorate, except the dissertation, by July 1 preceding the fellowship year. Preference given to dissertation year applicants. Deadline for application is December 1. 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 James L. Weeks, Professional Placement Manager, Argonne National Laboratory, 9700 S. Cass Avenue, Argonne, Illinois 60439.

Army Research Office--Durham. Research grants and contracts for basic research in mathematics, engineering, and physical and environmental sciences. Write to Chief Scientist, U. S. Army Research Office--Durham, Box CM, Duke Station, Durham, North Carolina 27706.


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 1, 1971.

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 1971-72 must be submitted before January 1, 1971. 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. For further information write to Mr. G. William Steckel, 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 $10,500 for the regular academic year. Teaching duties will amount to six hours per week in one semester and three hours per week in the other, or the equivalent. 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 recent Ph. D.'s 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 light, 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, 1971. Yale University is an equal opportunity employer.
John Simon Guggenheim Memorial Foundation Fellowships. Applicants 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 $9,000 in 1970. For more information write to President, John Simon Guggenheim Memorial Foundation, 90 Park Avenue, New York, New York 10016.

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. Several are available each academic year. The stipend is $10,800 for the academic year 1971-72, with the strong possibility of $2,400 additional income through summer research support. All staff benefits are available to holders. Appointments are for two years, and instructors may then be considered for regular faculty appointments. Applicants must have completed all requirements for the Ph.D. degree when the term of the 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. Appointments will be announced by February 15. Applications may be made to Chairman, Department of Mathematics, The University of Michigan, Ann Arbor, Michigan 48104.

Jolm Simon Fellowships. Open to young mathematicians with doctorates who show definite promise in research. The appointments are available for one year, subject to renewal for a second year. Write to Recruiting Department, Los Alamos Scientific Laboratory, United States Army. For more information write to Professor George Springer, Chairman, Hlavaty Professorship Committee, Department of Mathematics, Swain Hall East, Indiana University, Bloomington, Indiana 47401. Preference will be given to applications received before January 31, 1971.

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 1971-72. 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 School of Mathematics and should be returned (whether or not funds are expected from some other source) by January 15, 1971, 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 $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 January 5 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. Citizenship is unrestricted, but a foreign national must have full command of the English language. Approximately 150 awards are made in numerous fields, including mathematics. Tenable at Ames Research Center, Moffett Field, California; Goddard Space Flight Center, Greenbelt, Maryland; 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, Office of Scientific Personnel, JH 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 1971 are January 8, May 8, September 8, 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. The Office of Scientific Personnel of the National Research Council announces the availability of Postdoctoral Research Associateship appointments for 1971-72. Awards are made in several fields, including mathematics. Tenable in the Washington, D. C., 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 $14,192 for the recent recipient of the doctorate. 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 8, 1971. No materials will be distributed after December 28, 1970.

National Research Council. In association with certain Federal laboratories, the Office of Scientific Personnel of the NRC evaluates applications for associateships at the following laboratories: National Bureau of Standards (Washington, D. C., area and Boulder, Colorado); Naval Undersea Research and Development Center (San Diego, California); Naval Ordnance Laboratory (Silver Spring, Maryland); Air Force Systems Command (six locations); National Aeronautics and Space Administration (eight laboratories); Naval Research Laboratory (Washington, D. C.); U. S. Army Munitions Command (Feltman Laboratories, Dover, N. J., and other locations); U. S. Army Natick Laboratories (Natick, Massachusetts). Detailed information regarding these programs may be obtained from the Associateship Office, National Research Council, 2101 Constitution Avenue, N. W., Washington, D. C. 20418. Applicants should indicate area of interest. Deadline for receipt of applications is January 8, 1971.

National Science Foundation. Postdoctoral Fellowships. For U. S. citizens or nationals who have earned or who will have earned a doctoral degree as of the beginning of their fellowships, who wish to enter upon or continue postdoctoral study. Application materials may be obtained from the Fellowship Office, National Research Council, 2101 Constitution Avenue, N. W., Washington, D. C. 20418. Applications due in early December.


National Science Foundation. Science Faculty Fellowships. Requirements are a bachelor's degree or its equivalent, three or more academic years' teaching experience at the collegiate level with the rank of instructor or higher, and the intention to continue teaching. Applicants must also be U. S. citizens or nationals. Approximately 200 awards are available. Forms may be obtained by writing to the Division of Graduate Education in Science, National Science Foundation, Washington, D. C. 20550. Applications due in early October.

National Science Foundation. Senior Postdoctoral Fellowships. Candidates must have held a doctoral degree in one of the basic fields of science, mathematics, or engineering for at least five years (or have had equivalent scientific training and experience), and have achieved recognized stature in their profession. Applicants must be U. S. citizens or nationals. Approximately 50 awards are made. Information and application materials will be available in the late summer from the Division of Graduate Education in Science, National Science Foundation, Washington, D. C. 20550. Applications due in early October.

Naval Ordnance Laboratory. The Office of Scientific Personnel of the National Research Council announces the availability of Postdoctoral Research Associateship appointments for 1971-72. 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 $14,192 for the recent recipient of the doctorate. More details regarding this program may be obtained from the Associateship Office, National Research Council, 2101 Constitution Avenue, N. W., Washington, D. C. 20418. Deadline for submission of applications is January 8, 1971. No application material will be distributed after December 28, 1970.

Naval Undersea Research and Development Center. The Office of Scientific Personnel of the National Research Council announces the availability of Postdoctoral Research Associateship appointments for 1971-72. 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 $14,192 for the recent recipient of the doctorate. 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 8, 1971. No application materials will be distributed after December 28, 1970.

Benjamin Peirce 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, 1971.

Sloan Foundation. Unrestricted grants made to selected young university scientists who are regular faculty members for support of basic research in the physical sciences, including mathematics. Candidates do not apply but are nominated by their department chairmen 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 Binghamton. Research Associateship to allow a talented new Ph.D. to do research (limited teaching schedule). Applicants should have high research potential. Stipend $10,000 for academic year. Applications should be sent to Professor L. F. McAuley, Department of Mathematics, State University of New York at Binghamton, Binghamton, New York 13901, by March 1, 1971.

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. 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 1971 is January 8, with announcement of awards in March.

University of New Mexico. Postdoctoral fellowships in applied mathematics which are provided under the terms of a National Science Foundation Departmental Grant for recent recipients of the doctorate or for persons expecting to receive the doctorate in 1971. Awards, which are for the period September 1971 to June 1972, provide a stipend of $11,500. No formal duties are imposed, but recipients of the awards are expected to engage actively in research and to maintain a close association with faculty members having related mathematical interests. Inquiries should be addressed to Professor W. T. Kyner, Department of Mathematics and Statistics, University of New Mexico, Albuquerque, New Mexico 87106.

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 renewable. Applicants should write to Donald L. Kreider Chairman, Department of Mathematics, Dartmouth College, Hanover, New Hampshire 03755.

III. 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 $1,100. 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 should be under 40 years old. Application deadline is December 1 (November 1 for Marshall Fellowships for Denmark). Write to The American-Scandinavian Foundation, 127 East 73 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 and Eastern Europe, and the Near East, 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 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 administers academic exchange programs between scholars in the United States and in Hungary, Poland, Yugoslavia, Romania, Bulgaria, Czechoslovakia, and the Soviet Union. These programs operate under reciprocal agreements with the countries concerned. U. S. citizenship is required for all programs, except for short-term grants to citizens of the exchange countries.
for visits to the United States. Applicants to the exchange programs are normally required to have a full-time affiliation with a North American college or university and be faculty members or advanced doctoral candidates who will have completed all requirements for the Ph.D. except the thesis by the time of participation. Applicants will be excepted to have mastery of the language sufficient for the purposes of their research and study in the host country. IREX provides domestic and international transportation and an internal travel allowance for the participant; one-half of domestic and international transportation costs for accompanying family members for stays of at least one semester, or full family transportation costs for stays of an academic year; for married graduate students a family allowance determined by the number of dependents; for salaried participants a stipend in lieu of salary less the value of housing and other benefits received from the host country. Stipends are adjusted to take into account such other resources as fellowships and sabbatical salaries. For further information, write to International Research and Exchanges Board, 110 East Fifty-Ninth Street, New York, New York 10022.

Marshall Scholarships. Offered by the British Government to U. S. graduates; tenable at any university in the United Kingdom. Recipients of awards are required to take a degree at their British university. Fields unrestricted. Apply through British Consulates-General in the following regions: (1) Northeast: Suite 912, 225 Peachtree Street, N. E., Atlanta, Georgia 30303; (2) Midwest: Suite 912, 225 Peachtree Street, N. E., Atlanta, Georgia 30303; (3) South: Suite 912, 225 Peachtree Street, N. E., Atlanta, Georgia 30303; (4) West: Suite 912, 225 Peachtree Street, N. E., Atlanta, Georgia 30303; (5) Pacific: Suite 910, Suite 912, 225 Peachtree Street, N. E., Atlanta, Georgia 30303.


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.

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. Senior staff members may be nominated by any U. S. educational institution that offers a postbaccalaureate degree in one of the sciences, or by any nonprofit scientific research institute. Approximately 20 awards are made. Evaluations are made periodically. For application materials, write Division of Graduate Education in Science, National Science Foundation, Washington, D. C. 20550.

North Atlantic Treaty Organization, The NATO Science Committee makes a number of awards each year for training and education in operational research and related sciences; (1) Graduate Apprenticeships in Operational Research. To enable young scientists to receive practical training in operational research at one of a number of NATO or national centers. Normal assignment is for two years, subject to satisfactory completion of the first year. Applicants need not have previous experience in operational research, but they should have a scientific background with a sound basic training in mathematics. The award is $4,000 per year, plus certain other expenses. (2) Study Visits. These awards are made to operational research scientists who wish to make a "study visit" to a foreign country within the NATO Alliance, in order to learn about new techniques or procedures in operational research. (3) Visiting Experts. Provides support for a scientist who will act in an advisory capacity to a newly formed or developing operational research group in one of the NATO countries. (4) Science Fellowships. Awards are made for postgraduate academic training at overseas universities. Application forms and further details about these awards, together with information about the Science Committee's program of conferences in operational research, can be obtained from the Scientific Affairs Division (Operational Research), NATO, 1110 Brussels, Belgium.

Rotary Foundation. Graduate Fellowships and Undergraduate Scholarships. One academic year of study abroad for the 1972-73 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 146 countries in which there are Rotary Clubs. An applicant for both types of awards must be unmarried. An applicant for a graduate fellowship must be between the ages of 18 and 24 inclusive as of July 1972, 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 July 1972, 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, 1971.

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, Gausdalene 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: 'Forschungsstipendium' 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 'Forschungsstipendium' 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.

IV. Fellowships for Citizens of other Countries

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 the Information and Reference Division, Institute of International Education, 809 United Nations Plaza, New York, New York 10017.

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. 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. The number of grants for the academic year 1971-72 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 38 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, Washington, D. C. 20418.

National Science Foundation. Senior Foreign Scientist Fellowships. For foreign nationals who have had a doctoral degree in science for at least five years or comparable research or teaching experience over a 10-year period. Must be citizens of a nation which maintains diplomatic relations with the U. S. Approximately 50 awards are made. Applicants must be recommended by a U. S. educational institution participating in the program. Further information and a list of participating institutions may be obtained from Division of Graduate Education in Science, National Science Foundation, Washington, D. C. 20550. Application is made directly to the institution.

V. Other Sources of Fellowship Information


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.

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