Mathematics PhDs in 1989: Women Make Gains

DATABITS by Ed Connors

Women received 24% of the US citizen doctorates—the largest percentage ever and an increase over the 20 to 21% awarded in the last six years. However, only 16% of the new doctorates hired by US doctorate-granting departments were women.

Here are some highlights of the 1989 Annual AMS-MAA Survey. Despite an increase in doctorates awarded in the mathematical sciences, this 1989 Survey demonstrates a continuation of existing trends. In the period July 1, 1988 through June 30, 1989, US institutions awarded 904 doctorates in the mathematical sciences. This is a 12% increase over last year and an 18% increase over the average of the fall counts for the last four years.

The US total of 904 doctorates was increased by 100 from the total in the 1987–88 academic year. The 1988–89 total, however, remains several hundred below the annual number of degrees awarded in the early 1970s. United States institutions awarded only 411 or 46% of these doctorates to US citizens—up one percentage point over the previous year. (This percentage, however, had steadily declined since the late 1970s, when 75% of the doctorates awarded by US institutions went to US citizens.)

Of the 411 doctorates awarded to US citizens, 9 went to blacks, 7 of whom were women. Black women account for 7% of the doctorates awarded to female US citizens. These figures show relative improvement in recruiting women to mathematics.

How does mathematics compare with other technical fields? The following tables, drawn from 1986–87 US Department of Education data, tell the story. The fall off in women from baccalaureate to PhD degrees is steepest for mathematics. See the table on page three (where DATABITS' first column, "Mathematics PhDs in 1989," continues) for data on all degree recipients regardless of sex.

Women as a Percent of All Graduates by Field and Degree

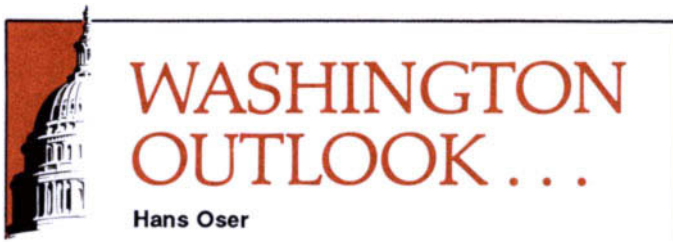|	BA/BS	MA/MS	PhD
Mathematics	46	39	17
Physics	16	16	9
Chemistry	37	32	21
Computer Science	35	29	14
Engineering	15	13	7
Biology	49	48	37
Life Sciences	48	49	35
All Fields	51	51	35

Mathematical Contest in Modeling

B. A. Fusaro

Oblivious to the gloom-and-doom about the state of mathematics education, 211 teams of three undergraduates each spent a weekend in February attacking two tough, tricky but realistic problems in applied mathematics. These student teams met the challenge of the fifth Mathematical Contest in Modeling (MCM). In addition to their creativity and knowledge, they were permitted to use libraries, microcomputers, or any other source, providing it was inanimate.

Each MCM faculty advisor was instructed to open the problem packet Friday morning. The team's first hurdle was to choose one of the two problems before noon. Its goal was to come up with a typed solution by 11:59 p.m. Monday.

The Midge problem, chosen by 93 teams, is based on a paper written by two biologists in 1981. Two species of small, biting insects—"midges"—are classified by antenna and wing length. There are six midges in one cluster and nine in the other. The problem is to classify several unknown midges that fall between the clusters. Standard software will output a straightline or parabola that separates the two clusters, but there can be no fixed answers as to what methods will best reveal the true classification based on the underlying biology (the degree of genetic relatedness) in any given case. Read on to see how one team addressed the biological side of this question.

The Airport problem, chosen by 118 teams, requires a scheme for assigning aircraft to a runway queue after pushing back from a gate. Relevant factors include the number of passengers on board, connections, and arrival and departure schedules. (A precontest check revealed that airlines use first-in-first-out, although one regional carrier, Piedmont Airlines, was experimenting with alternatives.)

WASHINGTON OUTLOOK . . .

Hans Oser

NSF BUDGET FOR FY 1990   As this column was being written, the Senate Appropriations Committee voted out an appropriations bill for the HUD-Independent Agencies that differs from the House bill passed last summer. The final word will come from a Senate-House conference expected to take place in mid-October. This is where things stand as of early October for the NSF:

NSF Budget for Fiscal Year 1990 (in millions)

	Requested	House	Senate
Research	$1,803	$1,715	$1,685
Antarctic Program	$156	$74	$156
Facility Upgrade	$0	$0	$20
Science Education	$190	$210	$200
TOTAL	$2,149	$1,999	$2,061

The facility upgrade is a disputed item between Congress and the NSF, which did not ask for the money in its 1990 budget request. NSF's priority was for supporting people before buildings, a strategy favored by most scientists. The House agreed with the NSF but the Senate bowed to pressure from some universities and put in $20 million to upgrade research facilities. The Senate-House conference will not take place until the second week in October. If the past is any guide, the conference committee will most likely discover again that the arithmetic mean is the appropriate formula to arrive at a compromise figure for the NSF budget. This would work out to an overall increase of 9% in 1990 (6% for the research part, 17% for science education). The administration had proposed a 14% increase to implement the five-year budget-doubling plan for NSF. Congress has now rejected this request for the third year in a row. Sympathy for the NSF is high in the authorizing committees of both houses, but they don't control the money. Senator Barbara Mikulski (D-MD), chair of the subcommittee responsible for the appropriations of HUD and the Independent Agencies, was able to come up with $200 million more than NASA had requested for the Space Station, but had only regrets for not being able to give the NSF a bit more. As it happens, the Goddard Space Flight Center is located in Maryland.

Another big-ticket item is also on the way to congressional approval. The superconducting supercollider (SSC) came out of the Senate-House conference committee with $225 million, just $25 million less than what the administration had asked for; $90 million is intended for continued research and development. The remainder will be used for final studies on the Waxahachie site in Texas and the procurement of "long-lead" items such as tooling and power transformers.

Senator Mark Hatfield (R-OR) recently spoke at a retreat of senior staff of the National Research Council. With a few bold strokes he characterized the budget climate by comparing the changes over a ten-year period from 1980 to 1990. Entitlement programs, now at $550 billion, grew 80% in constant dollars; defense, now $300 billion, grew by 69%; interest payments on the national debt have risen 189% to $180 billion, while everything else in the budget declined by 33% to $180 billion. Since the science budget is in that "all others" category, it is heartening to note that the NSF was able to grow from $912 million to approximately $2 billion, or roughly 39% in constant dollars. But these figures illustrate that science has to fight for a share of the most embattled part, that 15% slice of the federal budget pie that suffered the most precipitous decline in the last ten years. That fact must be kept in mind when discussing federal science policy (or lack thereof). We could have done a lot worse if science had not had its stout defenders in the federal appropriations process.

HIGH-PERFORMANCE COMPUTING   A rare constellation has developed between the Congress and those technical agencies of the executive branch that are covered by the FCCSET umbrella. That acronym stands for Federal Coordinating Council for Science, Engineering, and Technology. For the past 18 months these agencies have worked hard to develop a plan for cooperative research and development in the area of high-performance computing.

In one of his first public acts as the new Science and Technology Adviser to the President, D. Allan Bromley released on 8 September a report entitled "Federal High Performance Computing Program." This report is the culmination of an 18-month effort by the FCC-SET Committee on Computer Research and Applications. It sets out a five-year plan to make supercomputers available to a broad community of users in academia, industry, and government. IN-TERNET, which is managed by NSF, is a vast collection of smaller networks. It currently lacks both the necessary bandwidth and the capacity to grow. Based on an earlier FCCSET report of November 1987, the new plan recommends that in order to maintain and extend US sources of production as well as to support US competitiveness, a multidisciplinary effort should be undertaken in the four areas: (1) High performance computing systems, (2) Advanced software technology and algorithms, (3) A National Research and Education Network, (4) Basic research and human resources.

The program should be based on close cooperation between industry, government, and academia, the report states. FCCSET recommends that the present level of federal support, now about $500 million, should approximately double within the next five years.

Agreeing with FCCSET that the US must maintain its leadership in high performance computing, the authorizing committees in the House and Senate that deal with science and technology introduced legislation in the 101st Congress under the title "High Performance Computer Technology Act of 1989." Doug Walgren (D-PA), chair of the House Subcommittee on Science, Research, and Technology, held hearings in June that produced a phalanx of supportive witnesses for this legislation.

On 15 September, his counterpart in the Senate, Albert Gore (D-TN), who chairs the Subcommittee on Science, Technology, and Space, held hearings on S1067 and again assembled a very impressive list of witnesses for creating a high-performance network linking the nation's supercomputers. This broadband network would be called the National Research and Education Network (NREN). Both the FCCSET plan and the congressional bill call for adequate support to drive software and algorithmic developments, together with adequate standards and protocols to ensure the broadest access with a minimum of inconvenience. Senator Larry Pressler (R-SD), whose state holds NASA's magnetic library, said at the hearing that 95% of all the Landsat images have never been seen by a human eye ("never fired a neuron," as Senator Gore put it), but he believes that a broadband network capable of transmitting these pictures to the laboratories of research scientists would go a long way towards reaping some of the benefits that should be expected from having invested over $40 billion in our satellite programs over the past 20 years.

The House Subcommittee on Science, Research, and Technology held further hearings on high-performance computing on 3 October. D. Allan Bromley testified for the first time since his Senate confirmation hearings in July. With his strong statements he convinced the committee that he would be a very effective spokesman in defending the FCCSET plan within the administration. (It's a pleasure not to have another cheerleader for SDI, the chairman said.) Bromley refused to give any dollar amounts until the President submits his 1991 budget to Congress in January.

APPOINTMENTS IN THE DEPARTMENT OF EDUCATION   Secretary Lauro Cavazos has nominated Leonard L. Haynes, III, to be assistant secretary for post-secondary education. Haynes is the first black to be appointed to a high post in the Education Department. Haynes comes from Louisiana where he was assistant superintendent for academic programs in the state's department of education. It is expected that Leonard Childers will be deputy assistant secretary to Haynes.

The President also sent to the Senate the nomination of Christopher T. Cross for the position of assistant secretary of education. In his new role he will be supervising the department's Office of Educational Research and Improvement. Cross is a former Republican staff director of the House Committee on Education and Labor.

Things are finally moving at the Department of Education, maybe even a little too fast. NEWSWEEK magazine reported on 2 October that Secretary Cavazos may be out of office before the end of the year. Cavazos is considered by many a do-nothing education secretary. "Imagine what Bennett would have done with this [Charlottesville] summit?," the magazine asks. Well, they did not ask Bennett, but he had a succinct comment anyway: "Pap." The White House was not amused, and Marlin Fitzwater reprimanded him publicly. As for Cavazos' successor, two names are being mentioned: Tom Kean, outgoing Governor of New Jersey, and former Tennessee Governor Lamar Alexander. Also mentioned: the current Undersecretary for Education, John Theodore Sanders.

Hans Oser, most recently Technical Director at SIAM, formerly at the National Bureau of Standards, is now senior associate at the Office of Governmental and Public Affairs for the Joint Policy Board for Mathematics in Washington, DC.

Summer Mathematics Program for Minority Students

The Mathematics Department and the Dana Center of the University of California at Berkeley are planning a second summer program for high-achieving minority students who will have completed two years of undergraduate mathematics courses beginning with calculus. The program is scheduled for June 18 through July 27, 1990. Funding for the program is now being sought from the Sloan Foundation and the NSF. Each selected student will be immersed in two intensive mathematics seminars in order to motivate participants to consider attending graduate school and earning a PhD in mathematics. Room and board, travel, and a $2,000 stipend will be available to the selected students. Please urge potentially interested target minority students (Blacks, Hispanics, Native Americans) to apply. For further information, write: Mathematics/PDP Summer Program, 230B Stephens Hall, University of California, Berkeley, CA 94720. Faculty who might be interested in leading one of the seminars should contact Professor Leon Henkin at the above address or telephone (415) 642-3077.

Baccalaureate and Doctoral Degrees (1986–87)
(3d Column Shows 1st Column as a % of 2d Column)

	PhD	BA/BS	%
Mathematics	725	16,489	4
Physics	1,086	4,330	25
Chemistry	1,976	9,661	20
Physical Sciences	3,671	19,885	18
Geological Sciences	280	3,665	8
Life Sciences	3,423	38,114	9
Biology	537	27,458	2
Computer Science	374	39,664	1
Engineering	3,809	73,797	5
All Fields	34,120	991,339	3

Returning to the 1989 AMS-MAA Annual Survey, median starting salary for new doctorates reporting teaching (or teaching and research) employment was $30,500 for men and $31,000 for women, showing a slight edge for women. A detailed report of the 1989 AMS-MAA Survey appears in the November 1989 NOTICES. For a reprint of this full report write: Monica Foulkes, AMS, PO Box 6248, Providence, RI 02940; or telephone: (401) 272-9500.

Ed Connors, Professor of Mathematics, University of Massachusetts at Amherst, chairs the AMS-MAA Committee on Employment and Educational Policy and the AMS-MAA Data Committee. This DATABITS column is the first in a series designed to examine data from the scientific and engineering disciplines to see how the mathematical sciences compare with their counterparts.

Dinner in Honor of A. B. Willcox

Tuesday, 16 January, 1990 at 7:00 p.m.

This dinner will honor A. B. Willcox who retired at the end of August after 21 years as Executive Director of the MAA. Leonard Gillman will be Master of Ceremonies. It will be held in the Center and South sections of the Ballroom in the Hyatt Regency Louisville. Vegetarian meal available upon request.

Tickets are $25, including tax, gratuity, and gift contribution. To attend, complete the form below and return it, with payment, to the AMS as indicated. Payment by check or credit card (see form). In the event of cancellation of tickets purchased in advance, a 50% refund will be made if written notification is received in Providence prior to 5 January. After that date, no refund can be made. Tickets purchased in advance can be picked up at the dinner. Although some tickets may be available for purchase at the dinner, only those who purchase their tickets in advance can be assured a place. No refund can be made for tickets purchased at the dinner.

To attend, complete this form and return it with your payment by 5 January 1990 to: Mathematics Meetings Housing Bureau, P.O. Box 6887, Providence, Rhode Island 02940; (401) 272-9500, ext. 4145. For refund deadline, see information printed in color above.

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Printed Name   Signature

I am already preregistered for the meeting.   ☐ Yes   ☐ No

☐ Yes, I will attend the dinner. Enclosed is my $ _____ payment for _____ tickets.

Name(s) of Guest(s)

☐ No, I cannot attend the dinner, but I enclose $ _____ as a contribution to the gift.

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The judges selected 17 Meritorious Midge papers and named three of them winners. The winning schools (and MCM advisors) are California Polytechnic University (T. D. O'Neil), California Institute of Technology (D. B. Wales), and Washington University (H. Mukai).

The judges chose 22 Meritorious Airport papers and selected five of them as winners: Drake University (A. F. Kleiner), Harvey Mudd College (R. L. Borrelli), North Carolina School of Science and Mathematics (D. Teague), Ohio State University (T. G. Ralley), and the University of Dayton (R. C. Steinlage).

The eight winning teams were awarded bronze plaques. Their papers will be published in a special Winter 1989 issue of the Undergraduate Mathematics and Its Applications (UMAP) Journal. But there was more to come. SIAM invited two of the teams to present their results at a modeling minisymposium at its July San Diego meeting. There was a special lunch, an awards ceremony, and cash prizes. The SIAM-designated winners are the California Institute of Technology's "Classification of Midges" and Harvey Mudd College's "Controlling Departing Airport Traffic." The Midge paper uses a biological argument to infer that the square of the wing length is proportional to the cube of the antenna length. They assume a binomial (rather than a normal) distribution of the 15 specimens. The Airport paper observes that FIFO is "fair but inefficient." An assignment-type linear programming model is then developed to cut costs. Examples are provided to show how the model works.

ORSA tapped two teams for an all-expenses-paid presentation at its May meeting in Vancouver. The ORSA-designated winners are the California Polytechnic State University, San Luis Obispo, and (again) Harvey Mudd College. The Polytech team's brief, crisp paper uses R. A. Fisher's normal probability density function to find a line discriminator. The team opted for this older method mainly because of its robustness. The costs of miscalculation are discussed, as well as three other separation methods.

The judges had an unusual grading experience. One team had attacked the midge problem via neural nets. By the fifth round of grading, it emerged as a Meritorious paper with potential for being a winner. However, the judges did not feel comfortable enough with the theory of neural nets to make the difficult comparisons with papers that had used more familiar techniques. A decision was made to search for an expert in neural nets. Head judge C. S. Coleman located a visiting professor at a nearby school (we were grading in Claremont) who was a specialist in neural nets. Professor Mario Martelli from California State University at Fullerton kindly responded to our call. After presenting a miniseminar, deliberations began on the paper. It emerged as one of the three midge winners—the Washington University paper. Everyone was elated that three undergraduates could so expertly incorporate new ideas into their mathematical modeling.

Faculty members are urged to sponsor a team for their undergraduates in 1990. The MAA has scheduled a minicourse at Louisville to coach faculty members in becoming MCM advisors (see the October 1989 issue of FOCUS, page 14 for details).

The Consortium for Mathematics and Its Applications (COMAP), which administers the contest, sent announcements to all department heads in October. Early registrants will receive a free copy of the UMAP Journal. If you have not seen an announcement call me at (301) 543-6470, or COMAP at (617) 641-2600. The 1990 Mathematical Contest in Modeling weekend starts on Friday, the 23rd of February.

B. A. Fusaro, Professor of Mathematics at Salisbury State University in Salisbury, Maryland, is the originator and director of the Mathematical Contest in Modeling.

FOCUS on MAA Publications

MARTIN GARDNER

The Old Master

Since retiring as editor of the "Mathematical Games and Recreations" column in SCIENTIFIC AMERICAN, Martin Gardner has taken on writing projects at a dizzying pace, including four book projects for the MAA: THE RIDDLES OF THE SPHINX, and the trilogy: MATHEMATICAL CARNIVAL, CIRCUS, and MAGIC SHOW.

Gardner thinks that it's a good idea to publish with the MAA because "the Association reaches teachers of mathematics, many of whom did not know about my books, three of which I have updated for MAA editions. The MAA does a good job of reaching professional mathematicians and teachers through its mailings and journal advertisements."

In addition to his MAA projects, Gardner has just completed GARDNER'S WHYS AND WHEREFORES (The University of Chicago Press), and will soon complete a sequel to his ANNOTATED ALICE. He has also been very busy with a major revision of THE AMBIDEXTEROUS UNIVERSE (W. H. Freeman and Company), which contains a big chapter on superstrings.

Gardner's interest in problems is as strong as ever. As our interview ended, he asked me if I knew the problem about the opaque cube? I didn't. Here it is.

The Opaque Cube. What is the minimal area of a set of points within a unit cube that will block all light paths passing through that cube?

LEONARD GILLMAN

Strikes a Chord

WRITING MATHEMATICS WELL is an MAA bestseller. As its author Leonard Gillman prepares for the second printing, he reflected on writing for the MAA: "At the risk of sounding corny, if your writing is worthwhile, then it's good for MAA. The Association is certainly the right audience for my book. I originally wrote it with prospective MAA journal authors in mind, and it seems to be reaching many of them." Gillman, who is past-president of the MAA, and a veteran book author adds: "The Association is a very friendly place in which to publish. I enjoy working with people whom I can see and trust. It's rare to find a publisher that has an editor like Peter Renz, who has a PhD in mathematics. He brings an understanding and intelligence to a publishing project that is very important."

WRITING MATHEMATICS WELL evolved over several years. With modesty, Gillman said: "Fortunately I sent out early drafts of the manuscript to Paul Halmos and Meyer Jerison, who removed some terrible puns and beat me down royally." We don't know all of the details, but the editorial process clearly worked.

Gillman is currently polishing his retiring presidential address that he will give at the January 1990 meeting of the MAA in Louisville. He also has just signed a contract with W. H. Freeman and Company to write a new calculus book. How about DOING CALCULUS WELL as a title?

ROSS A. HONSBERGER

A Real Gem

Ross, aka "Mr. Mathematical Gems," Honsberger wrote his first book, INGENUITY IN MATHEMATICS, for the MAA in 1970. "I never thought of sending it to any other publisher," said Honsberger in a recent interview. Since then he has written six more, three GEMS, two MORSELS, and one PLUMS in the Dolciani Mathematical Exposition series, with two more in the pipeline. That works out to about one book every two years! And all for the MAA!

When asked how he does it, Honsberger, a Toronto native, responded: "I sit down in a La-Z-Boy armchair with a big clipboard and scratch it out—I wouldn't dare write straight away at a word processor. I search for the right phrasing, the right word—right off the bat. I don't plan on smoothing it out later. I try to write it smoothly the first time."

Honsberger usually stays within 75 miles of home and does not travel to meetings. Thus we rarely have an opportunity to compliment him on his writing. Well, Ross, as your book sales make evident, we like your writing very much!

What's next? Honsberger says that he plans to mine the many old journals of Waterloo's library in search of more gems. "I like to share the neat gems that I find with others. I'm really a miniaturist, sort of like Schubert, who wrote six hundred songs but no symphonies."

THOMAS M. THOMPSON

Making Connections

Thomas Thompson, recent winner of the Association's Beckenbach Book Prize, says that he did not envision FROM ERROR-CORRECTING CODES TO SPHERE PACKING THROUGH SIMPLE GROUPS as being a book. "When Sherman Stein, my thesis advisor at UC Davis, told me that it could become a book, I thought to myself, 'we'll see.'"

After successfully defending his doctoral dissertation, momentum for the book increased. Stein called Thompson to tell him that Henry Tropp, a historian of mathematics, and Stillman Drake, the University of Toronto Galileo scholar, thought that his dissertation should become a book. Stein proceeded to contact the MAA's Committee on Publications, and the rest is history.

Thompson feels that his book makes connections, from the very concrete to the very abstract. He is greatly impressed by the variety and volume of mathematical research produced every year, and he wonders: "Who's making the connections? Who's bringing it together?"

Thompson is thinking about doing another book, perhaps about the history of the sporadic simple groups. When asked if he might write it for the MAA, Thompson responded: "Absolutely! The MAA makes accessible books accessible to the mathematical community." Those of us who acquire books for the Association love that kind of talk.

Donald J. Albers, Professor of Mathematics at Menlo College in Atherton, California, interviewed these MAA authors. He is also an Associate Editor of FOCUS, and Chair of the Committee on Publications and the Publications Management Committee.

FOCUS EMPLOYMENT ADVERTISEMENTS

FOCUS advertisements reach the MAA's 28,000 members, most of whom are college and university mathematicians. FOCUS ads cost approximately 60 cents per word for solid text; such text will yield roughly sixty-six words for each eight lines and slightly more than eight lines per inch.

Rates for FOCUS Employment Ads are:

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There is a 15% discount for the same ad in more than two consecutive issues (with contract in advance). An insertion order on institutional letterhead will be considered a contract. The MAA will invoice advertisers after the **first** occurrence specified in the contract.

Anyone wishing to place an employment advertisement in FOCUS should write to:

Siobhán B. Chamberlin
FOCUS Employment Advertisements
The Mathematical Association of America
1529 Eighteenth Street, NW
Washington, D.C. 20036
(202) 387-5200
Fax: 202-265-2384

POSITION ANNOUNCEMENT

Trinity University invites applications and nominations for a tenure-track position in mathematics, appointment beginning August 1990. The appointment will be made at the rank of Assistant Professor. Responsibilities include teaching nine credit hours per semester, continuing scholarly activity, assisting in curriculum development, advising, and committee service. Minimum qualifications are the PhD in Mathematics with excellence in and strong commitment to teaching.

Founded in 1869, Trinity University occupies a modern campus overlooking the San Antonio skyline. Purposely small and selective, with about 2,500 students, Trinity stresses a high quality, undergraduate liberal arts and science program; in particular, the Mathematics Department does not offer graduate courses. San Antonio is a city of approximately 850,00 people situated in a metropolitan area of 1.2 million.

Closing date for applications in December 29, 1989. Send vita, graduate transcripts, and three letters of reference to:

Professor William F. Trench
Department of Mathematics
Trinity University
715 Stadium Drive
San Antonio, Texas 78212

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THE UNIVERSITY OF NEW MEXICO

Albuquerque, New Mexico
Department of Mathematics and Statistics

The Department is seeking outstanding candidates for a tenure or tenure-track (expected) position in mathematics education. Candidates should have a strong background in mathematics and an established research record in mathematics education. There is the possibility of a joint appointment with the College of Education.

Review of applications will begin January 15, 1990, and will continue until the position is filled. All excep-

tionally strong candidates, especially women and minority groups, are urged to apply. Please have vitae and three letters of reference sent to:

Professor Robert Cogburn, Chair
Hiring Committee
Dept. of Mathematics and Statistics
The University of New Mexico
Albuquerque, NM 87131

THE UNIVERSITY OF NEW MEXICO IS AN AA/EOE

FAIRFIELD UNIVERSITY
Tenure-track Position in Mathematics

An entry level Assistant Professor is sought to start in September 1990 who must have a PhD in Mathematics and evidence of teaching ability. Normal teaching load is 3 courses per semester plus research. Salary is competitive and full consideration is given to dossiers completed by February 1, 1990. Please send a resumé and three letters of reference to Joseph B. Dennin, Chair, Dept. of Math and Computer Science, Fairfield University, Fairfield, CT 06430-7524. Fairfield is a Jesuit University located 60 minutes from New York City. It is an Equal Opportunity/Affirmative Action Employer.

DEPARTMENT OF MATHEMATICS
Western Illinois University

Applications and nominations for the position of chairperson with associate or full professor faculty rank are invited. The doctorate in mathematics, statistics, or mathematics education is required. Evidence of excellence in undergraduate and graduate teaching, a record of substantial research/scholarly achievement, and the demonstration of appropriate administrative ability is expected. The selection process will begin November 1, 1989 and continue until the position is filled. Send application, vita, photocopies of transcripts, and at least three letters of reference to: Chairperson Search Committee, Department of Mathematics, Western Illinois University, Macomb, IL 61455. WIU IS AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER. WOMEN, MINORITIES, AND HANDICAPPED PERSONS ARE ESPECIALLY ENCOURAGED TO APPLY.

CHAIRPERSON
Mathematical Sciences Department
Bentley College

Bentley College invites applications for the position of chair of the Mathematical Sciences Department, effective July 1, 1990. The chairperson directs all aspects of departmental activities, which include curriculum development, recruiting, scheduling, budgeting, and faculty development and evaluation.

An applicant must hold a PhD in Mathematics, Quantitative Methods, Operations Research, Statistics, or a related field, have a distinguished record as a teacher and scholar and have the ability to provide strong academic leadership. Some administrative experience is very desirable.

Located in suburban Boston, Bentley College has long been known for its leadership in the education of business professionals. In recent years, the college has experienced a dramatic growth and currently enrolls 8,000 graduate and undergraduate students. The Department of Mathematical Sciences has 12 full-time and 19 adjunct faculty members.

Send letter of application, vita, and three current letters of reference to:

Dr. John C. Hegarty
Chair Search Committee
Mathematical Sciences Department
Bentley College
175 Forest Street
Waltham, MA 02154-4705

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Wake Forest University announces the establishment of a distinguished professorship made possible by the Z. Smith Reynolds Foundation. The scholar selected to fill this position must have an established record of recognized scholarship and a commitment to teaching and research in a university setting. Duties include teaching, continuing a program of research, contributing to the intellectual life of the Department of Mathematics and Computer Science, and fostering the mathematical growth of gifted undergraduates. The position, which carries both tenure and the rank of professor, could be filled as early as the fall semester of 1990.

Wake Forest University is a comprehensive university with 5,000 students, 3,500 of whom are in the undergraduate college. The Department of Mathematics and Computer Science has 17 permanent positions, 13 of which are in mathematics, and offers majors in mathematics and computer science and an MA in mathematics.

Inquiries, nominations, and applications should be directed to:

Professor Richard Carmichael, Chair
Department of Mathematics
and Computer Science
P.O. Box 7311
Wake Forest University
Winston-Salem, NC 27109 USA

Evaluation of applicants will begin in late winter and will continue until the position is filled. AA/EO employer.

MATHEMATICS

The Mathematics Department of the Southern College of Technology seeks applicants for one or more tenure-track positions at the rank of Assistant or Associate Professor. The Department desires faculty who can contribute to upper division programs in Mathematics. PhD in mathematics or mathematical statistics required. Research potential is desirable but is neither required nor heavily weighed.

The ideal candidate will show a strong mastery of the discipline, a commitment to professional growth and development, an ability for and commitment to excellence in teaching, and the potential and desire to enhance the college's intellectual community.

The Mathematics Department has fourteen tenure-track positions. There is a minor in mathematics as well as a substantial load of service courses. The college is located in Marietta, GA.

A complete application consists of a letter of application, a curriculum vitae, transcripts of all college work, and a minimum of two letters of reference. The search will continue until the position is filled, but applications received by February 1 will be considered first.

Applications and inquiries should be addressed to:

Dr. James C. Kropa
Mathematics Department
Southern College of Technology
Marietta, Georgia 30060-2896

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MILLS COLLEGE
Oakland, California

The Department of Mathematics and Computer Science invites applications for a tenure-track position as an Assistant Professor of Mathematics, to commence in the fall of 1990 (subject to final budgetary approval). Applicants must have a PhD in mathematics and should submit evidence of exceptional teaching ability and strong research potential. Mills is a small liberal arts college for women, located in the San Francisco Bay Area, and is known for its innovative mathematics and computer science programs. Applications should include a vita and three letters of reference (addressing both teaching ability and research potential). Please have all materials sent to:

Head of the Mathematics Search Committee
Department of Mathematics
and Computer Science
Mills College
5000 MacArthur Boulevard
Oakland, California 94613

The deadline for completed applications is January 20, 1990. Mills College is an affirmative action/equal opportunity employer.

THE JOHNS HOPKINS UNIVERSITY

Applications are invited for a junior position in statistics, to begin in Fall 1990. Selection is based on demonstration and promise of excellence in research, teaching, and innovative application. AA/EOE. Applicants are asked to furnish a vita, transcripts, a letter describing professional interests and aspirations, and arrange for three letters of recommendation to be sent to Prof. John C. Wierman, Chairman, Mathematical Sciences Department, The Johns Hopkins University, Baltimore, MD 21218.

MATHEMATICS EDUCATION

Tenure-track position, August 1990. Teach courses in mathematics education and mathematics. Doctoral degree or ABD preferred (Master's degree considered). Teaching experience desired (K–12/or higher education). Rank and salary dependent on experience and qualification. Send a letter of application, resumé, current transcript (copy acceptable), and three letters of recommendation to: Director of Human Resources Management, Northwest Missouri State University, Maryville, MO 64468. NWMSU is an AA/EOE. Northwest encourages women and minorities to apply. Deadline: February 1, 1990 or until filled.

DARTMOUTH COLLEGE
John Wesley Young
Research Instructorship

The John Wesley Young Research Instructorship is a two year post-doctoral appointment for promising new or recent PhD's whose research interests overlap a department member's. Current departmental interests include areas in algebra, analysis, algebraic geometry, combinatorics, computer science, differential geometry, logic and set theory, number theory, probability, and topology. Teaching duties of four ten-week courses spread over two or three quarters typically include at least one course in the instructor's speciality and include elementary, advanced, and (at instructor's option) graduate courses. Nine-month salary of $31,000 supplemented by summer (resident) research stipend of $6,889 (two-ninths). Send letter of application, resumé, graduate transcript, thesis abstract, description of other research activities and interests if appropriate, and 3 or preferably 4 letters of recommendation (at least one should discuss teaching) to Richard E. Williamson (Recruiting), Department of Math and CS, Bradley Hall, Hanover, NH 03755. Applications received by Jan. 15 receive first consideration; applications will be accepted until position is filled. Dartmouth College is committed to affirmative action and strongly encourages applications from minorities and women.

CHAIRPERSON
Department of Mathematics

SUNY Plattsburgh invites applications for Department Chairperson in the Mathematics Department. Opportunity to provide leadership in undergraduate curriculum development (both for mathematics majors and in-service courses) and to help establish a supportive environment for teaching and scholarship.

Qualifications: PhD in Mathematics or Statistics plus five years of college mathematics teaching, administrative experience at the departmental level, and continued involvement in mathematics research required. Experience as Chair or Vice-chair of a Department of Mathematics preferred. Rank will be Associate or full Professor, depending upon experience.

INDIVIDUALS WITH AN UNDERSTANDING OF AND SENSITIVITY TO MINORITY AND GENDER CONCERNS ARE ENCOURAGED TO APPLY.

SUNY Plattsburgh is primarily an undergraduate college with approximately 5,500 students. At present, there are over 100 math majors. Plattsburgh is located in Northeastern New York State on Lake Champlain, near the Adirondack Mountains and approximately sixty miles from Montreal.

Deadline is December 15, 1989; however applications will be accepted until the position is filled.

Send nominations and applications with a list of references to:

Chair, Search Committee
c/o Office of Personnel/Affirmative Action
SUNY Plattsburgh
Box 1639-1529
Plattsburgh, New York 12901

SUNY PLATTSBURGH IS AN EQUAL OPPORTUNITY EMPLOYER

OBERLIN COLLEGE
Department of Mathematics
Oberlin, Oh 44074

Four-year, full-time, continuing position at the level of Instructor, Assistant Professor, or higher, starting 1990–91. PhD in hand or expected by September 1990. Background in Operations Research and interest in applied mathematics essential. Excellence in teaching and productive scholarship required. Five courses per year, including a two-course OR sequence. Salary commensurate with qualifications and experience. Vita, transcripts, and three letters of reference to be received by February 1, 1990. Send to Professor Robert M. Young, Chairman, Department of Mathematics, Oberlin College, Oberlin, Ohio 44074. Affirmative Action Equal Opportunity Employer.

OBERLIN COLLEGE
Department of Mathematics
Oberlin, Oh 44074

Four-year, full-time, continuing position at the level of Instructor, Assistant Professor, or higher, starting 1990–91. PhD in hand or expected by September 1990. Background in modern applied analysis essential. All specialities considered by preference given to chaotic dynamical systems, numerical analysis, and approximation theory. Excellence in teaching and productive scholarship required. Five courses per year, including at least one advanced course in modern applied analysis. Salary commensurate with qualifications and experience. Vita, transcripts, and three letters of reference to be received by February 1, 1990. Send to Professor Robert M. Young, Chairman, Department of Mathematics, Oberlin College, Oberlin, Ohio 44074. Affirmative Action Equal Opportunity Employer.

OBERLIN COLLEGE
Department of Mathematics
Oberlin, Oh 44074

Possible four-year, full-time, continuing position at the level of Instructor, Assistant Professor, or higher, starting 1990–91. PhD in hand or expected by September 1990. Background in Discrete Mathematics essential. Excellence in teaching and productive scholarship required. Five courses per year, including at least one advanced course in Discrete Mathematics. Salary commensurate with qualifications and experience. Vita, transcripts, and three letters of reference to be received by February 1, 1990. Send to Professor Robert M. Young, Chairman, Department of Mathematics, Oberlin College, Oberlin, Ohio 44074. Affirmative Action Equal Opportunity Employer.

BRADLEY UNIVERSITY
Mathematics Department

Applications are invited for an entry-level tenure-track position at the rank of Assistant Professor beginning August, 1990. Candidates should have a strong commitment to teaching. The PhD is required, and continuing professional growth (publication) is necessary for tenure and advancement. Applications from all areas are invited. Special consideration will be given to those in the fields of statistics, mathematical modeling, discrete mathematics, and geometry. Salary is competitive. The closing date is January 12, 1990, or until the position is filled. Other positions may be available at a later date. Send letter of application, vita, and three or more letters of recommendation to: Dr. T. V. Sastry, Search Committee, Department of Mathematics, Bradley University, Peoria, IL 61625. Bradley University is AA/EO employer. Woman and minorities are encourage to apply.

MATHEMATICS DEPARTMENT
Kennesaw State College
P.O. Box 444, Marietta, GA 30061

At least one tenure-track position in Mathematics at the level of Assistant Professor beginning in September, 1990. A PhD is required with a strong commitment to undergraduate education as well as an interest in scholarly activities. Preference will be given to degrees in Combinatorial Group Theory

Combinatorics, or Statistics. Salary and rank are competitive and commensurate with credentials and experience. The College is located in Northwest Metro Atlanta, and enrolls over 9,000 day and evening students in undergraduate and graduate programs. The department of Mathematics has 18 full-time faculty and shares 6 others with the Department of Computer Science. Send resumé and a list of three references to Dr. Nancy E. Zumoff, Chair, Search Committee. Application deadline is March 1, 1990, or until filled. EOE/AA.

GOUCHER COLLEGE
Mathematics and
Computer Science Department

Applications are invited for two tenure-track positions at the Assistant Professor level beginning August, 1990. Qualifications include a PhD in mathematics or computer science and a strong commitment to and demonstrated excellence in undergraduate teaching. Responsibilities include a teaching load of 9–10 hrs/wk and continuing scholarly activity. Goucher is a select, private, coeducational, liberal arts college located eight miles north of Baltimore and is convenient to Washington, DC. The selection process will begin Jan., 1990. Goucher is an EOE. Send vita and three letters of recommendation to:

Dr. Joan S. Morrison
Chair of the Mathematics and
Computer Science Department
Towson, MD 21204

FURMAN UNIVERSITY
Greenville, South Carolina 29613

The Department of Mathematics at Furman University, an undergraduate, liberal arts college, invites applications for a tenure-track Assistant Professorship beginning September 1, 1990. A PhD in a mathematical science is required. All areas of specialization are acceptable. Excellence in teaching and continued scholarly activity are expected of all faculty. A vita, graduate and undergraduate transcripts, and three letters of recommendation should be sent to Robert Fray, Department of Mathematics. Application deadline: February 1, 1990. EOE/AAE.

COLBY COLLEGE
WATERVILLE, ME
Mathematics Department

Colby College invites applications for two tenure-track and one visiting position (at any level) in mathematics/computer science. While we welcome applications from well-qualified and highly motivated candidates in all branches of mathematics, our principal aim is to fill one vacancy in each of the general areas: algebra, analysis, and a branch of mathematics closely related to computer science. A strong research program plus a firm commitment to undergraduate teaching are essential for these positions.

Well-qualified female applicants at the level of assistant or associate professor will, in addition, be considered for one of the College's Clare Boothe Luce Chairs for women scientists.

Colby is a highly selective, private, liberal arts college with an enrollment of 1,700 students. It is located in mid-Maine, on the edge of the Belgrade Lakes recreation area, just over 3 hour's drive north of Boston, and one hour from the Maine coast. The nearby towns of Waterville, Oakland, and Winslow offer excellent public schools and a variety of affordable housing.

The present faculty search is part of a significant mathematics development at Colby following the recent appointment of Keith Devlin of Stanford to the Carter Professorship and Chair of the Mathematics Department.

The College offers a rich computing environment based on VAX mainframes and Apple Macintosh workstations. Faculty offices are provided with networked Macintosh IIcx or SE30 computers, in addition to which there are a number of networked Macintosh clusters spread around the campus. The Mathematics Department recently upgraded its in-house teaching/research laboratory to comprise 18 Macintosh II/IIcx computers, a central file server, and associated visual display apparatus. Colby is an acknowledged national leader in the development of computer-aided instruction in mathematics.

Please send a letter of application and a resumé and the names of three referees to Professor Keith Devlin, Chair, Department of Mathematics, Colby College, Waterville, ME 04901.

The deadline for applications is 12 December 1989 in the first instance; thereafter, we shall continue to review applications until the position are filled. Colby is an AA/EO Employer and encourages applications from women and minorities.

UNIVERSITY OF SOUTH CAROLINA
Department of Mathematics

Applications are invited for anticipated tenure-track faculty positions at all ranks. Applications in all areas of mathematics will be considered. The Department is building on existing research strengths and is increasing the scope of its programs in applied and computational mathematics. Faculty research is supported by excellent departmental library and high-performance computing facilities. The PhD degree or its equivalent is required, and all appointments will be consistent with the Department's commitment to excellence in research and teaching at the undergraduate and graduate levels. A resumé, containing a summary of research accomplishments and goals, and four letters of recommendation should be sent to:

Dr. Colin Bennett, Chairman
Department of Mathematics
University of South Carolina
Columbia, South Carolina 29208

The closing date for applications is January 31, 1990. The University of South Carolina is an Affirmative Action/Equal Opportunity Employer.

MATHEMATICS
Assistant Professor/Instructor

Albright College seeks applicants for a tenure-track position commencing September 1990. PhD or near completion required. A small, liberal arts institution strongly dedicated to teaching, the college, with a newly approved 3 course/semester load, also encourages scholarly research. Teaching duties include foundational level plus an equal share of varied advanced courses. Salary commensurate with credentials and is competitive. Located in Reading, Pennsylvania, the college is within commuting distance of 3 major northeastern cities. An EOE/AA employer, women and minority candidates are encouraged to apply. Please send resumés and names of three (3) references to: Raymond J. Mest, Chair, Department of Mathematics, Albright college, P.O. Box 15234, Reading, PA 19612-5234. Review of applications begins December 8, 1989 and continues until the position is filled.

UNIVERSITY OF OREGON
DEPARTMENT OF MATHEMATICS

The position of Instructor and Assistant to the Head will be available July 1, 1990. Twelve months appointment with salary of $25,000 to $28,000. Master's degree in mathematics, evidence of administrative ability and commitment to teaching are required. Duties include: supervision of civil service and student employees and Graduate Teaching Fellow; budget and class schedules preparation; registration; undergraduate advising and teaching. Write for full job description. Send letter of application, resumé, and three letters of reference to Frank W. Anderson, Head, Department of Mathematics, University of Oregon, Eugene, Oregon 97403. Application deadline February 1, 1990. Equal Opportunity/Affirmative Action Employer.

ITHACA COLLEGE

The Department of Mathematics and Computer Science at Ithaca College has at least three tenure-eligible positions in mathematics at the Assistant Professor level available for the 1990–91 academic year. All successful candidates will be expected to teach a wide variety of mathematics courses at the undergraduate level. A PhD is required. For one of these positions, specialization in statistics is preferred. Screening begins December 15, 1989. Send vitae to: Dr. Eric Robinson, Chair, Department of Mathematics and Computer Science, Ithaca College, Ithaca, New York 14850. An Affirmative Action/Equal Opportunity Employer.

THE UNIVERSITY OF AKRON
Akron, Ohio

A tenure-track position in mathematics in the Community and Technical College at the University of Akron is available beginning August, 1990. Applicants must have at least a Master's Degree in Mathematics or a related field. The candidates will be expected to teach a variety of topics from algebra to differential equations. Evidence of effective teaching will be required and a strong commitment to two-year college education and professional activity is expected. Review of applications will begin February 1, 1990. Send vitae, three letters of reference, and transcripts to Wendell Johnson, Math Search Chair, Associate Studies, The University of Akron, Akron, Ohio 44325-6105. The University of Akron is an Equal Education and Employment Institution.

ROGER WILLIAMS COLLEGE
Division of Mathematics
and Computer Science

The Division of Mathematics and Computer Science of Roger Williams College welcomes applications for a full-time faculty position beginning in September of 1990. The Division offers major programs in mathematics and computer science and provides support courses for College programs in science, engineering, business, architecture, psychology, and general education. We seek candidates who would enjoy teaching a variety of major and service courses in mathematics or in computer science or in both areas. The normal teaching load is 12 contract hours. ABD required, doctorate and teaching experience preferred. Salaries are competitive and fringe benefits are excellent.

The College enrolls approximately 2,000 full-time students in a variety of liberal arts and professional programs. It is situated in historic Bristol, RI on a bluff overlooking beautiful Narragansett Bay. The

College is located approximately thirty minutes from Providence and one hour from Boston.

Send a letter of application, curriculum vita, and three letters of reference to: Faculty Search Committee, Division of Mathematics and Computer Science, Roger Williams College, Bristol, RI 02809. Roger Williams College is an affirmative action / equal opportunity employer.

DEPAUW UNIVERSITY
Department of Mathematics and Computer Science
Greencastle, IN 46135

A tenure-track position teaching courses in our undergraduate computer science major is available beginning in August, 1990. Although research is encouraged, a commitment to excellence in teaching is essential. Duties include teaching three courses each semester plus a January term every other year. Applicants should have a PhD in Computer Science or a PhD in Mathematics and competence to teach several undergraduate courses in computer science. Rank and salary are open and will be negotiated on the basis of qualifications and experience. DePauw University is a selective, liberal arts university with strong commitments to diversity and the sciences. In addition to an excellent benefits program, it offers many opportunities for faculty development, on and off campus. The University is located in a rural setting approximately one hour by automobile from Indianapolis, Bloomington, Terre Haute, and West Lafayette. Send Vitae, transcript, and three letters of recommendation by March 1, 1990 to Carl P. Singer, Chair of the search committee, at the above address.

Applications from women and minorities are especially encouraged.

EO/AA

ROSE-HULMAN INSTITUTE OF TECHNOLOGY
Department of Mathematics

A tenure-track assistant or associate professorship will be available September 1, 1990. Applicants should have a PhD in mathematics or statistics and a strong commitment to teaching and scholarship. Ability and interest to teach statistics, operations research and/or applied mathematics is desirable. Send letter of application, resumé, three letters of recommendation, and graduate transcripts to George Berzsenyi, Chairman, Department of Mathematics, Rose-Hulman Institute of Technology, Terre Haute, IN 47803.

Rose-Hulman Institute of Technology is an equal opportunity employer.

TRINITY COLLEGE
Hartford, CT

The Department of Mathematics at Trinity College invites applications for one tenure-track position and for one or more visiting positions, which, pending approval, will begin in the academic year 1990–91. The normal teaching load is five semester courses per year ("3/2"). Rank and salary are open, and dependent on qualifications. Specialization is also open. Requirements for the positions: PhD in mathematics, evidence of teaching excellence at the undergraduate level, and (for the tenure-track jobs) indications of promise in research.

Applicants should send a c.v., three letters of reference (at least one of which speaks directly to teaching experience), and a statement of teaching and research interests to:

Search Committee Chair
Dept. of Mathematics
Trinity College
Hartford, CT 06106

by February 1, 1990.

Representatives of the department will attend the Employment Register at the joint Annual Meetings in Louisville in January, 1990.

Applicants will be considered for both the tenure-track and visiting positions unless they specify otherwise.

Trinity College is an Equal Opportunity/Affirmative Action employer. Women and members of minority groups are especially encouraged to apply.

STONEHILL COLLEGE
North Easton, MA 02357
Department of Mathematics
Program in Computer Science

The Mathematics Department invites applications for a tenure-track position beginning in the Fall semester of 1990. Candidates should be able to teach upper level Computer Science courses including Theory of Computation, Artificial Intelligence, and Organization of Programming Languages. There will also be the opportunity for teaching mathematics courses. PhD required, formal training in Computer Science expected, and teaching experience preferred. Salary is competitive. Stonehill College, located 22 miles south of Boston, is a private, liberal arts college with an enrollment of 1,900. The College maintains a VAX 8350 as well as thirty-six IBM PC's networked to the VAX. The bachelor's degree is offered in Mathematics, Computer Science, and Mathematics-Computer Science. Send letter of application, curriculum vitae, and three letters of reference by Jan. 15, 1990 to Ralph Bravaco, Dept. of Mathematics, Stonehill College, North Easton, MA 02357. Stonehill College is an equal opportunity employer.

REGIS COLLEGE
Weston, Massachusetts

Applications are invited for two positions (at least one tenure-track) at the assistant or associate professor level for the fall of 1990. A PhD in mathematics by the fall of 1990 is required. Candidates with a broad interest in undergraduate mathematics education and a special interest in analysis or statistics are encouraged to apply. Duties include teaching 9 hours per semester, service to the department and to the college, and possibly research. Regis College is a small liberal arts college for women, located in a residential suburb of Boston; it is in close proximity to Brandeis, Harvard, and MIT. Send resumé to Susan Williamson, Mathematics Department, Regis College, Weston, MA 02193 by January 15, 1990.

STETSON UNIVERSITY
Department of Mathematics and Computer Science

Applications are invited for a non-tenure-track position in computer science for 1990–91, beginning Fall 1990. The position is on a year-to-year basis, renewable for at most three years. The Department has a Micro VAX II running ULTRIX 2.2 and assorted microcomputers. University facilities reside in an Academic Computer Center which has a VAX 6210 running VMS, and numerous microcomputers and graphics peripherals, including IBM PS/2's, model 50, and Mac SE's and Mac II's. Stetson University, located in Central Florida, is a private, liberal arts

university of 2,500 students with a commitment to excellence in undergraduate education. Applicants should have an MS degree in computer science. Send vitae and three letters of recommendation to: Professor Dennis Kletzing, Department of Mathematics and Computer Science, Stetson University, DeLand, Florida 32720. Deadline for applications is January 31, 1990, or until position is filled. Women and minorities are encouraged to apply.

STETSON UNIVERSITY
Department of Mathematics and Computer Science

Applications are invited for a tenure-track position in mathematics at the Assistant Professor level beginning Fall, 1990. A PhD in mathematics is required. Applicants should have a strong commitment to undergraduate teaching in a liberal arts environment. Teaching load: 9–10 hrs/wk. Responsibilities include teaching mathematics courses at all levels of the undergraduate curriculum, and continuing scholarly activity. The department currently has 10 full-time faculty members. Stetson University, located in Central Florida, is a small, private, comprehensive university of 2,500 students. Its three schools—the College of Arts and Sciences, the School of Business, and the School of Music—are dedicated to excellence in teaching and are united by a commitment to the liberal arts. Send vitae and three letters of recommendation to: Professor Dennis Kletzing, Department of Mathematics and Computer Science, Stetson University, DeLand, Florida 32720. Deadline for applications is January 31, 1990, or until position is filled. Women and minorities are encouraged to apply.

EASTERN ILLINOIS UNIVERSITY
Department of Mathematics
Chairperson

Eastern Illinois University invites applications for Chairperson of the Department of Mathematics. Requirements include a doctorate in a mathematical science and experience in teaching and research; administrative experience is preferred.

EIU is a residential university of 10,000 students located in east central Illinois. The Department of Mathematics, with 28 regular faculty members, offers Bachelor's and Master's degrees in Mathematics and Mathematics Education, and Bachelor's degrees in applied Computer Science.

Send applications with transcripts, vita, three letters of reference, and a brief statement of educational and administrative philosophy to Jon Laible, Dean, College of Liberal Arts and Sciences, Eastern Illinois University, Charleston, IL 61920. The closing date is January 1, 1990 or when the position is filled.

EIU is an affirmative action, equal opportunity employer.

SAINT MICHAEL'S COLLEGE
Department of Mathematics
Winooski, Vermont

Applications are invited for a tenure-track position at the Assistant Professor level to begin September 1, 1990. Candidates should have the PhD in mathematics (by Fall 1990), and a strong commitment to undergraduate teaching as well as to scholarly activity. Salary and fringe benefits will be competitive. To assure full consideration, applications should be received by January 10, 1990. Please send resumé, transcript, and three letters of recommendation to Personnel Office, Saint Michael's College, Winooski

Park, Colchester, VT 05439. Saint Michael's College is an Affirmative Action/Equal Opportunity Employer.

FROSTBURG STATE UNIVERSITY

Full-time, tenure-track, Instructor/Assistant Professor position, beginning Fall 1990, to teach 12 credits undergraduate mathematics per semester and share departmental responsibilities. Salary range $25,000–$35,000; rank and salary commensurate with credentials and experience. Master's in mathematics or related field required along with strong commitment to undergraduate teaching. Teaching experience and quality of teaching of prime concern. Doctorate in mathematics or mathematics education preferred; background involving experience with applications of mathematics welcome. Questions may be directed to: Dr. Richard Weimer, Department Chair, (301) 689-4377. Send letter of interest, resumé, transcripts, and three letters of recommendation, not later than February 5, 1990, to: Mr. C. Douglas Schmidt, Director of Personnel Services, Frostburg State University, Frostburg, MD 21532. Women and minorities encouraged to apply. AA/EOE.

MARYVILLE COLLEGE
Maryville, Tennessee 37801

Tenure-track position in Computer Science / Mathematics at a junior level, beginning September, 1990. PhD in Mathematics or Computer Science preferred, MS in Computer Science considered. Duties include teaching undergraduate courses in computer science and mathematics and advising students in the Computer Science/Mathematics major. Experience should be in some area of Applied Mathematics or Computer Science. Maryville College is a Presbyterian-related, undergraduate college with a strong, liberal arts tradition. Classes are small and excellence in teaching is emphasized. Send resumé, graduate transcript, and three letters of reference (at least one of which should address teaching experience and potential) to: *Dr. William Dent*, Chairman, Department of Mathematics and Computer Science, Maryville College, Maryville, Tennessee 37801. Applications completed by January 15, 1990, will be given first consideration. EOE.

SAN JOSE STATE UNIVERSITY
Department of Mathematics and Computer Science
San Jose, California 95192-0103

Four openings for Assistant or Associate Professor (Professor in exceptional case) to start Fall 1990. PhD in any mathematical science, we are especially looking for partial differential equations, numerical analysis, applied mathematics education, or computer science. Must have demonstrated high ability and interest in undergraduate teaching at all levels and be able to take an active role in departmental affairs. Rank and salary commensurate with experience. Significant professional activity required for eventual tenure consideration. Application deadline January 1, 1990. Send vita, three letters of reference, and transcripts to Dr. Veril L. Phillips, Chairman. SJSU is an Equal Opportunity/Affirmative Action Employer.

BELOIT COLLEGE

Tenure-track Assistant or Associate Professor beginning 8/90 to teach computer science and mathematics in a liberal arts setting. Qualifications: PhD in a mathematical science, excellence in teaching, potential for growth. Computer Science and/or Statistics must be area(s) of professional interest. Apply by letter and full vita to R. Roy, Acting Chairman, Mathematics & Computer Science, Beloit College, 700 College St., Beloit, WI 53511; arrange for letters of reference and graduate and undergraduate transcripts to be sent. Deadline: 1 Feb. 1990. Beloit College is an Affirmative Action/Equal Opportunity Employer.

UNIVERSITY OF PUGET SOUND
Department of Mathematics and Computer Science

Full-time, tenure-track Assistant Professor; to begin August 1990. Teach undergraduate mathematics courses. Three courses per semester. PhD in mathematical science, and a genuine interest in teaching required. Preference may be given to candidates with a background in applied mathematics. Submit interest letter and complete dossier by January 8, 1990, to: Mathematics Search, University of Puget Sound, P.O. Box 7297, Tacoma, WA 98407. An Equal Opportunity, Affirmative Action Educator/Employer.

UNIVERSITY OF EVANSVILLE
Department of Mathematics

Applications are invited for a tenure-track position as assistant professor of mathematics beginning August, 1990. PhD in mathematics and strong commitment to teaching required. Some background preferred in at least one of the following areas: discrete mathematics, statistics, numerical methods and/or applied mathematics. Responsibilities include teaching 9–12 hours per semester in a wide range of undergraduate mathematics courses, continuing scholarly activities, and University service. Send application letter, resumé, transcripts, and 3 letters of reference to:

Dr. J. Robert Knott, Chairman
Mathematics Department
University of Evansville
Evansville, Indiana 47722

FRANKLIN & MARSHALL COLLEGE

Tenure-track assistant professor position in undergraduate mathematics department starting in the Fall of 1990. PhD expected by Sept. 1990. Teaching: three courses per semester; special consideration given to candidates who can teach courses in statistics. Commitment to continued scholarly activity expected. Send resumé, undergraduate and graduate transcripts, and three letters of recommendation, one or more of which addresses teaching ability, to A. D. Feldman, Chair, Department of Mathematics, Franklin and Marshall College, Lancaster PA 17604-3003, by Feb. 1, 1990. Franklin and Marshall College is committed to cultural pluralism and strongly encourages applications from minorities and women.

WASHINGTON AND LEE UNIVERSITY
Department of Mathematics
Lexington, Virginia 24450

One tenure-track position at Asst./Assoc. Prof. level beginning 1990–91 AY. PhD in mathematics required; training in numerical analysis highly desirable. We hope to fill the position with an individual who will interact with colleagues in the physical sciences and engineering in both research and program development. W&L is a privately endowed, undergraduate college with a highly selected student body, small classes, and a commitment to excellence in teaching. Competitive salary and excellent fringe benefit package. Send resumé, graduate transcript (unofficial), three letters of reference

(at least one about teaching) to Search Committee at the address above. Consideration of applications will begin Jan. 2 and will continue until position is filled. EQUAL OPPORTUNITY EMPLOYER.

LOYOLA COLLEGE IN MARYLAND
Master's Level Position
Mathematical Sciences

A full-time, continuing, non-tenure-track position available in the Mathematical Sciences Department of a medium-sized selective liberal arts college in Fall '90. Primary duty is teaching freshman and sophomore level courses, especially elementary statistics. Teaching load is 4 courses per semester. A master's degree and some background in statistics is required, with exposure to instructional uses of computing desirable. Excellence in teaching a must. Please send resumé and three letters of reference to: Dr. George Mackiw, Chair, Department of Mathematical Sciences, LOYOLA COLLEGE, 4501 N. Charles Street, Baltimore, MD 21210-2699. EOE.

HOLLINS COLLEGE
Mathematics and Statistics

Applications are invited for one tenure-track position with duties beginning September, 1990. The position requires the teaching of six freshman- to senior-level courses per year—training in statistics is highly desirable. Excellent teaching skills are essential and professional activity is encouraged. The PhD is required for an assistant professorship; a master's degree and "ABD" are required for an instructorship. The salary is competitive. Applications will be accepted until January 31, 1990, or until the position is filled. EOE. A letter of application, resumé, and three letters of reference should be sent to Dr. Caren L. Diefenderfer, PO Box 9562, Hollins College, Roanoke, VA 24020.

MATHEMATICS EDUCATION
Wright State University
Department of Mathematics and Statistics
Dayton, Ohio 45435

One or two tenure-track positions in mathematics education anticipated for Fall 1990. Preference will be given to applicants who qualify for appointment at the rank of full professor but all qualified applicants will receive consideration. Excellent research record or potential and commitment to quality teaching required. Applicants should expect to complete all requirements for the PhD or EdD by September 15, 1990. Competitive salary and excellent fringe benefits. Two-course teaching load. Department has 30 plus PhD faculty and offers a master's degree. Please send vita, graduate transcript(s), and three letters of reference to Mathematics Education Search Committee. Closing date: November 15, 1989, then every two weeks until selection or July 1, 1990. WSU is an AA/EOE.

THE UNIVERSITY OF SCRANTON
Mathematics Department

The University of Scranton is a Jesuit University with over 3,500 undergraduates. The Mathematics Department is newly formed from a split in a combined Mathematics/Computer Science Department. It has 15 full-time faculty and about 50 majors.

Four tenure-track positions are available for Fall 1990 for faculty interested in a teaching environment where research is encouraged and supported. Individuals with expertise in any area of mathematics will be considered. Preferred areas include Applied

Mathematics, Probability/Statistics, Actuarial Mathematics, Algebra, and Analysis. Rank and salary are open and competitive.

Submit a vita, transcripts, and three references to Mathematics Faculty Search Committee, University of Scranton, Scranton, PA 18510 or phone (717) 961-7774. Screening will begin at once and applications will be considered until all positions have been filled. Interviews will be conducted at the Louisville meeting Employment Register in January. An AA/EO Employer and Educator.

THE COLLEGE OF WOOSTER
Mathematical Sciences Dept.
Wooster, Ohio 44691

Assistant Professor of Mathematics: Multi-year visiting position beginning Aug. 25, 1990. To teach elementary and advanced courses in mathematics, direct senior independent study, and participate in interdisciplinary courses. Breadth of interest in mathematics desired; PhD required. Salary competitive. Review of applications will begin January 25, 1990 and continue until the position is filled. Send vita, transcripts, and 3 letters of recommendation to Charles R. Hampton at the address above. The College of Wooster is an Equal Opportunity, Affirmative Action Employer.

MATHEMATICS DEPARTMENT
University of North Dakota
Box 8162 University Station
Grand Forks, ND 58202

Applications are invited for several tenure-track positions at the assistant and associate professor levels starting August 16, 1990. Consideration will be given to all areas of mathematics, as well as statistics and math education. Must possess a strong commitment to teaching and research and have completed PhD requirements by starting date. Teaching loads are three courses/semester. US citizenship or permanent residency status preferred. Salary and fringes competitive. Open until filled. Send resumé, copy of transcripts, and three letters of reference to Selection Committee. UND is an AA/EOE.

NORTHERN ARIZONA UNIVERSITY
Flagstaff, Arizona

ORDINARY DIFFERENTIAL EQUATIONS: Tenure-track Associate Professor with specialty in the geometric theory of dynamical systems. In addition to this authorized position, several appointments at the assistant professor rank are anticipated this year and next year as we seek to develop an existing strength into a clear focus. Current research of the department in this area concentrates mainly but not exclusively on planar systems with polynomial righthand sides.

ALGEBRA/COMBINATORICS: Tenure-track Assistant Professor position in algebra or combinatorics, especially combinatorial areas of algebra or geometry. Several current faculty have related research interests.

MATHEMATICS EDUCATION: Three tenure-track positions, one Associate Professor and two Assistant Professor. Candidates must have experience in teacher preparation programs. The appointees will share the activities of our mathematics education program, including secondary teacher preparation, instruction of mathematics and methods courses for educators and others, development of a vibrant research group and design of collaborative programs

with schools, including those with high minority enrollments. We intend to appoint a group of mathematics educators who will develop a clear research concentration in either technology in mathematics instruction or access and participation of minority populations.

STATISTICS: Tenure-track Assistant Professor in statistics. Preference will be given to applicants with a strong theoretical background, interest in applied statistics and intramural consulting, and the ability to contribute to the development of an interactive research group in statistics. The department has four statisticians, including the advertised position.

For all positions, qualifications include a doctorate in the advertised specialty, substantial evidence of high quality teaching and demonstrated potential for a productive, quality research program. Positions at the associate rank require a sustained program of high quality research in the advertised specialty.

NAU has an on-campus enrollment of approximately 14,000. The department of 34 faculty offers bachelor's and master's degree programs with emphases including mathematics, mathematics education, statistics, and actuarial science. Flagstaff is located at an altitude of 7,000 feet in the cool pine forests of Northern Arizona near high mountains, the Grand Canyon, and numerous other natural attractions.

Send letter of application and vita, and direct three letters of reference to: Screening Committee, Department of Mathematics, PO Box 5717, Flagstaff, AZ 86011. The searches will remain open until the positions are filled; however, the Screening Committees will begin reviewing applications on December 1, 1989.

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

MOREHEAD STATE UNIVERSITY
Department of Mathematics Sciences
Assistant Professor of Mathematics

Morehead State University invites applications and nominations for a tenure-track position of Assistant Professor of Mathematics beginning August, 1990. Responsibilities: Teach twelve hours per semester of primarily undergraduate courses in mathematics and/or statistics together with scholarly productivity and service. Qualifications: PhD in mathematics required. A strong commitment to quality instruction expected. Preference will be given applicants with experience and/or training in computing. Review of credentials begins January 18, 1990; applications accepted until February 5, 1990. Submit letter of application, resumé, transcript, three references, and history of employment to:

OFFICE OF PERSONNEL SERVICES
MOREHEAD STATE UNIVERSITY
HM 101
MOREHEAD, KY 40351

MSU is an EEO/AA employer and requires compliance with the Immigration Reform and Control Act of 1986.

SOUTHEASTERN MASSACHUSETTS UNIVERSITY

Two full-time faculty positions in the Department of Mathematics beginning September 1990.

Earned doctorate and excellence in teaching required. Research potential/experience is expected. The selected candidate will join an established program with traditional and computer-oriented degrees and will have the opportunity to participate in

the development of mathematics courses for growing undergraduate and graduate programs in the Department of Mathematics and in the Department of Computer and Information Sciences.

Application deadline: **January 15, 1990.** Applications, including resumé, transcript, and *three letters of reference* should be sent to:

Rufus A. Winsor, Chairperson
Department of Mathematics
Southeastern Massachusetts University
North Dartmouth, MA 02747

SMU IS AN EO/AA EMPLOYER.

OLD DOMINION UNIVERSITY
Department of Mathematics and Statistics

The Department of Mathematics and Statistics of Old Dominion University invites applications for one or more tenure-track positions in applied mathematics at the assistant professor level beginning August 1990.

The department currently has 21 faculty members active in research. The non-statistics research faculty are devoted to the study of applied mathematics. Topics of current interest are: mathematical combustion, elasticity, magnetohydrodynamics, gas solids mechanics, numerical analysis, approximation theory, integral equations, and mathematical biology. The successful candidate will have a doctorate degree and have demonstrated strong research potential in one of the above mentioned areas or a related field of applied mathematics.

The department has an active graduate program and offers a Doctor of Philosophy degree in applied mathematics and statistics. Also offered are Bachelor of Science and Master of Science degrees in both fields.

The deadline for applications is February 15, 1990. Applicants should send a curriculum vitae; three letters of recommendation, one of which should come from a thesis advisor, and any available pre-prints of research articles to: Professor D. Glenn Lasseigne, Dept. of Mathematics and Statistics, Old Dominion University, Norfolk, VA 23529-0077.

Old Dominion University is an affirmative action, equal opportunity institution and requires compliance with the Immigration Reform and Control Act of 1986.

UNIVERSITY OF NORTH CAROLINA AT WILMINGTON

Applications are invited from candidates in applied analysis or algebra/combinatorics for a tenure-track position as assistant professor to begin Fall, 1990. Within analysis, we seek specialization in partial differential equations (scientific applications, computing expertise a plus) or functional analysis (application to P.D.E.'s). Within algebra/combinatorics, we prefer involvement in applications such as coding, complexity, or algorithm analysis. PhD is required. Duties include teaching, research, and service.

The department has 34 faculty and offers bachelor's and master's degrees in pure and applied mathematics and the BS in computer science. Campus computing facilities include VAX 11/785's and PC labs. The department has a Sequent parallel computer, IRIS workstation, and networked UNIX machines.

Applications received by February 5, 1990 will receive full consideration. Apply to: Douglas D. Smith, Chairman, Mathematical Sciences Department, University of North Carolina at Wilmington, Wilmington, NC 28403-3297; (919) 3965-3290.

The University is an equal opportunity/affirmative action employer.

Salisbury State University invites nominations and applications for the position of Dean, Richard A. Henson School of Science and Technology. The school was endowed by R. A. Henson, founder of Henson Aviation.

The position is available July 1, 1990. The deadline for applications is December 15, 1989. Salisbury State University is an Equal Opportunity, Affirmative Action Employer. Qualified women, minorities, and the disabled are encouraged to apply.

For more information, write: Dr. C. Richard McKenzie, Chair, Dean Search Committee, Department of Chemistry & Physics, Salisbury State University, Salisbury, Maryland 21801.

CALIFORNIA STATE UNIVERSITY LONG BEACH
Department of Mathematics

Two tenure-track positions beginning Fall, 1990: one in statistics and one in Math Education. Both positions require completed PhD, evidence of excellent teaching, strong research record or potential. Asst. or Assoc. Prof. preferred; applicants with distinguished records in teaching and research may be considered for Professor. Must be US citizen or permanent resident. Further details of duties, salary range, specialty, and degree requirements provided on request. Positions open until filled, but selection begins from applicants with complete files (resumé, transcript, 3 reference letters) 12/1/89. Apply to Roberto A. Mena, Chair, Mathematics Department, CSULB, Long Beach, CA 90840. CSULB is an Affirmative Action/Equal Opportunity Employer.

NORTHERN KENTUCKY UNIVERSITY
Department of Mathematics and Computer Science

The Department of Mathematics and Computer Science has a tenure-track position in secondary mathematics education beginning in August 1990. A doctorate in Mathematics Education or a Mathematical Science is required. Candidates should also have appropriate graduate coursework in both mathematics and mathematics education. Responsibilities include teaching a secondary mathematics methods course and mathematics courses at least through the level of calculus, supervising student teachers and interns, and liaison and in-service activities with local schools. The normal teaching load is twelve hours per semester. Quality teaching is emphasized; continued scholarly activity and service are required.

Review of applicants will begin February 1, 1990. Apply to: Professor Frank Dietrich, Chair of Search Committee, Department of Mathematics and Computer Science, Northern Kentucky University, Highland heights, KY 41076.

NKU is an Affirmative Action/Equal Opportunity Employer and actively seeks the candidacy of minorities and women.

WESTERN KENTUCKY UNIVERSITY
Headship, Department of Mathematics

Applications are invited for the Headship of the Department of Mathematics with appointment date as early as July 1, 1990. WKU has an enrollment of more than 14,500 students and is located in Bowling Green, KY (population approximately 56,000), two hours south of Louisville and one hour north of Nashville, TN. The Department consists of 28 full-time faculty and offers masters and baccalaureate degree programs with undergraduate enrollment of approximately 170 majors and 100 minors. Applicants must hold a doctorate in mathematics and have at least five years of college mathematics teaching experience. Applicants should provide evidence of administrative leadership, effective teaching, public service, and research/scholarly activities. To insure consideration, respond by January 15, 1990. The position will remain open until filled. Send letter of application, vita, and names of at least three references to: Office of Academic Affairs, Mathematics Headship Search, Western Kentucky University, Bowling Green, KY 42101. An Affirmative Action, Equal Opportunity Employer.

INDIANA UNIVERSITY EAST
Richmond, Indiana
Division of Natural Science and Mathematics

IU East is seeking candidates for an appointment in mathematics. A broad background in mathematics and a master's degree are required; PhD preferred. Ability to teach well with experience in college teaching. The position begins fall 1990. Rank, salary, and tenure status dependent on candidate's qualifications. To achieve cultural diversity within the faculty, Indiana University East is particularly interested in receiving applications from Blacks, Hispanics, and other minorities.

Applicants to positions listed above need to submit a letter of application, curriculum vita, two current letters of reference, and three other references with phone numbers. Send all materials to the contact person for the position of interest at the following address: Dr. Kris Dhawale, Acting Chairperson, Division of Natural Science and Mathematics, Indiana University East, 2324 Chester Boulevard, Richmond, IN 47374-9979.

Evaluation of applicants will begin October 15, 1989 and continue until the position is filled. Indiana University East is an Equal Opportunity/Affirmative Action Institution.

SAINT OLAF COLLEGE
Northfield, Minnesota 55057

One two-year postdoctoral position, partially funded by the Fund for the Improvement of Post-Secondary Education. This position is half-time teaching (three courses/year) and half-time research. Unlike most postdoctoral positions, there will be a strong emphasis upon developing the teaching aspect of an academic career through a mentored internship. This position is allotted generous research and professional travel budgets. Salary: $31,500. For new or recent PhD's only. Write to Professor Paul D. Humke, Mathematics Department, St. Olaf College, Northfield, MN 55057. ST. Olaf is an Equal Opportunity/Affirmative Action Employer.

HIRAM COLLEGE
Mathematical Sciences Department

The Mathematical Sciences Department of Hiram College invites applications for a faculty position beginning September, 1990. A tenure-track appointment requires a PhD or evidence that it will be completed within three years of the initial appointment date. Otherwise, a one-year appointment with the possibility of renewal will be made. Demonstrated evidence of excellence in teaching and an active interest in remaining current in the mathematics field is required. Rank and salary are open.

Duties include teaching seven courses per year in mathematics at all undergraduate levels and working closely with students. The ability to teach courses in statistics or computer science is desirable but not required.

Hiram College is a small, selective Liberal Arts college located on a rural campus in northeast Ohio, about 35 miles from Cleveland.

Send a resumé, transcripts, and three letters of reference from persons familiar with your teaching to Dr. J. M. Green, Chair, Mathematical Sciences Department, Hiram College, Hiram, OH 44234. Hiram College is an Equal Opportunity Employer.

Representatives will be interviewing in Louisville in January.

CENTRAL MICHIGAN UNIVERSITY

Three tenure-track positions. Position one is at the assistant or associate professor level and requires a doctorate in mathematics education with teaching experience in K–12, the ability to teach undergraduate mathematics courses, and do research in mathematics education. Position two is at the assistant professor level and requires a PhD in mathematics with research interest in combinatorial designs, approximation theory, or operator theory. Position three is at the assistant professor level and requires a PhD in applied mathematics or statistics. Priority will be given to those who can supplement existing research areas within the department. Candidates for all positions should show promise of excellence in teaching and research. Salaries are competitive and benefits include university paid TIAA, medical, dental, group life. Send resumé, transcripts, and three letters of recommendation to R. J. Fleming, Dept. of Mathematics, Central Michigan University, Mt. Pleasant, MI 48859 by January 22, 1990. Late applications will be received until the positions are filled. CMU is an AA/EOE.

DEPARTMENT HEAD
Mathematics and Statistics
Louisiana Tech University

Louisiana Tech University invites applications for Head, Department of Mathematics and Statistics. The Departments of Chemistry, Mathematics and Statistics, and Physics make up the School of Science within the College of Arts and Sciences. The Department Head has responsibility for all facets of departmental activity, which include curriculum development, budgeting, departmental activity, scheduling, and faculty evaluation. As the Department's chief administrative officer, he/she will report to the Dean of the College through the Director of the School. The Department is comprised of approximately twenty-five full-time faculty members. Salary is commensurate with qualifications. The position will be available on/after July 1, 1990.

Applicants must hold a PhD in Mathematics or Statistics, have an established record of research

and scholarly activity, and be able to provide strong academic leadership.

Although applications will be accepted until the position is filled, evaluation of applicants will begin immediately following the joint meetings in Louisville (a representative will be registered at the meeting). Please submit application, resumé, and three letters of reference to:

Dean
College of Arts and Sciences
Louisiana Tech University
Ruston, LA 71272

An Affirmative Action/Equal Opportunity Employer

RUTGERS UNIVERSITY
Newark, New Jersey
Assistant/Associate Professor

The Academic Foundations Department invites applications for a tenure-track position teaching developmental mathematics. Doctorate required. Preference given to those who have demonstrated excellence in teaching underprepared students from diverse ethnic backgrounds and who have a record of research and publication. Responsibilities include teaching computation and algebra, developing curriculum, training tutors, advising, serving on committees, and coordinating the Department's evening courses. By 31 December, send letter and vita to Chair, Academic Foundations Department, Conklin Hall, Rutgers University, Newark, NJ 07102. Hiring is subject to final budgetary approval. AA/EEO. Women and minorities are encouraged to apply.

UNITED STATES NAVAL ACADEMY
Department of Mathematics

The Naval Academy anticipates having one or two tenure-track and several one-year visiting positions available, all at the assistant professor level, commencing in August of 1990. The initial salary will be competitive and commensurate with experience and qualifications. Research opportunities exist for augmenting salary during the summer intersessional period. Specialization in applied mathematics or operations research is of particular interest. Applicants must possess an earned PhD by the date of appointment, have a commitment to excellence to teaching, and be capable of pursuing an independent program of research. Inquiries and applications should be sent to J. M. D'Archangelo, Mathematics Department, US Naval Academy, Annapolis, Maryland 21402-5002. Required of each applicant are a resumé, transcripts of academic records, and three letters of recommendation from persons familiar with the applicant's teaching and research. Interviews will be conducted at the annual AMS/MAA meeting in Louisville in January. The Naval Academy is an EO/AA employer.

CALIFORNIA STATE POLYTECHNIC UNIVERSITY, POMONA

Two tenure-track teaching positions: one in Mathematics Education, salary dependent upon qualifications, Doctorate in Mathematics Education or Mathematics; one in Applied Mathematics at the assistant professor level, salary dependent upon qualifications, Doctorate in Applied Mathematics or Mathematics. Evidence of potential for excellent teaching and scholarly research required. Application, resumé, copy of transcripts, and three references to be postmarked by 2/16/90. For additional information or to apply, contact: Search Committee, Mathematics Department, California State Polytechnic University, 3801 W. Temple Ave., Pomona, CA 91768-4033; (714) 869-3467.

UNIV. OF MICHIGAN, DEARBORN
Dept. of Math and Stat
Dearborn, Michigan 48128-1491

Department Chair Ronald R. Morash. The U of M-Dbn plans to fill a tenure-track position starting in Sept. 1990. It is at the Asst. or Assoc. Prof. level and requires a PhD in Mathematics or Statistics. A research interest in an applied area of mathematics or in statistics is preferred. Teaching capability in an applied area of mathematics or in statistics is a requirement for this position. The teaching load is 9 credit hours per term. To apply, send resumé and have three letters of recommendation sent to Ronald P. Morash, Chairman, Dept. of Math and Stat. The Univ of Mich-Dbn is an Equal Opportunity Employer and specifically invites and encourages applications from women and minorities.

EMORY & HENRY COLLEGE
Emory, VA 24327

Assistant Professor tenure-track position in the Department of Mathematics for the fall of 1990. PhD and a strong commitment to undergraduate teaching in a liberal arts environment required. Emory & Henry, a 150 year old liberal arts college located in Southwest Virginia, is affiliated with the United Methodist Church and enrolls 800 students. Send resumé, transcripts, and three letters of recommendation to: Richard Pfau, Dean, Emory & Henry College, Emory, VA 24327. AA/EOE.

JOHNS HOPKINS UNIVERSITY

The Mathematical Sciences Department invites applications for the 1990–91

ELIEZER NADDOR
POSTDOCTORAL FELLOWSHIP

The Fellow is to be an outstanding graduating doctoral student in mathematics, statistics, or operations research, who plans an academic research career. The fellowship provides a $29,000 stipend plus fringe benefits, to fully support 12 months of postdoctoral study at the department in an area of interest to some department faculty member, free from teaching and administrative duties. Selection is made without discrimination on the basis of race, color, religion, sex, or national origin. Applicants should provide a current vita, a letter describing career aspirations and a research plan for the fellowship year, and transcripts, and should arrange for three letters of recommendation to be sent, by February 28, 1990, to:

Professor John C. Wierman, Chairman
Mathematical Sciences Department
220 Maryland Hall
The Johns Hopkins University
Baltimore, Maryland 21218

MISSISSIPPI UNIVERSITY FOR WOMEN
Science/Math Division
Columbus, Mississippi

Applications are being accepted for a tenure-track faculty position in Mathematics beginning August, 1990. The University is a co-educational, primarily undergraduate institution with an enrollment of over 2,000 students. The mission of the University is to provide curricula and service offerings of the highest quality for all students, with emphasis on the distinctive opportunities available to women.

Minimum qualifications: PhD degree and evidence of excellence in teaching; competence in applied mathematics preferred. Teaching responsibilities will include introductory and upper-level math courses.

Applicants should submit letter of interest, resumé, transcripts, and three letters of recommendation to Dr. Harry L. Sherman, Miss Univ for Women, Science/Math Division, Box W-100, Columbus, MS 39701 no later than February 2, 1990.

MATHEMATICS

Potsdam College of the State University of New York invites applications for two positions, one full-time tenure-track, one a full-time temporary position in Mathematics commencing September 1, 1990. Responsibilities: Teach at most, 12 hours or undergraduate and beginning graduate mathematics. Qualifications: PhD in Mathematics (any area). Near completion of ABD will be considered. Salary: Commensurate. Send letter of application, resumé, graduate transcripts, and letters of reference to: Dr. A. Spencer, Department of Mathematics, Potsdam College, Potsdam, NY 13676. Application review will commence February 1, 1990 and continue until the position is filled. Potsdam College is committed to providing opportunities for women and minorities and actively seeks these candidates.

WESTERN WASHINGTON UNIVERSITY
Department of Mathematics

Applications are invited for a tenure-track position in mathematics education to begin Fall 1990. Responsibilities include developing curricula, inservice opportunities, research projects, and teaching both methods and mathematics courses. Requirements include a PhD in Mathematics Education/Mathematics and an enjoyment of mathematics. Recent elementary/secondary teaching experience is desirable.

Interested candidates should submit a letter of application, a vita, complete transcripts, and three letters of recommendation to Professor Thomas T. Read, Chair, Dept. of Mathematics, Western Washington University, Bellingham, WA 98225. Deadline for applications is February 1, 1990. Western Washington University is an Equal Opportunity-Affirmative Action Employer.

AUGUSTANA COLLEGE
Mathematics
Sioux Falls, SD 57197

Augustana College (SD) invites applications for a tenure-eligible position as Assistant Professor of Mathematics to teach lower and upper division math courses. PhD required. Preference to applications dated by February 15, 1990. Send letter of application, vita, graduate transcripts (direct from Registrar's Office), names, identities, and phone numbers of three current references, and a statement of future professional goals to: Jeanne Kruse, Adm. Asst., Augustana College, Sioux Falls, SD 57197; (605) 336-4113.

NORTHEASTERN STATE UNIVERSITY

The Department of Mathematics and Computer Science is accepting applications for two (2) full-time tenure-track positions, beginning August 20, 1990. Position 1: Mathematics—Master's degree required, doctorate preferred with at least 45 graduate hours in math. Applicants expected to teach statistics, all levels undergraduate and some graduate math courses. Position 2: Mathematics Education (subject to funding) PhD or EdD in Math or Math Education required. A minimum of two years teaching experience at the K–8 desirable, experience at organizing workshops and/or in-service training programs for elementary teachers desirable. Responsible for method and content courses for elementary

education majors. Send letter of application, vita, three letters of recommendation to: Personnel Services, Northeastern State University, Tahlequah, OK 74464. Initial review of applications begins January 8, 1990. An equal opportunity/AA employer.

UNIVERSITY OF WYOMING
Department of Mathematics

Invites applications for the following positions:

One tenure-track position at the assistant professor level in the area of functional analysis, numerical linear algebra, dynamical systems theory, and algebraic/computational combinatorics.

Send resumé and direct three letters of recommendation to:

Professor W. Bridges, Chairman
Mathematics Department
PO Box 3036 University Station
University of Wyoming
Laramie, WY 82071-3036
(307) 766-4222

Applications completed by January 31, 1990 will be given first consideration. The University of Wyoming is an Equal Opportunity/Affirmative Action Employer.

GEORGIA SOUTHERN COLLEGE
Mathematics / Computer Science Positions:

Applications are invited to fill three tenure-track positions in the Mathematics and Computer Science Department. An advanced degree in a mathematical science or computer science is required and a doctorate is preferred. Applications are sought from all areas of pure and applied mathematics, and computer science, although a special effort will be made to fill one of the positions with someone having expertise in computer networking and communications. Rank (instructor or assistant professor preferred; associate professor considered) and salary commensurate with qualifications. The Department provides support for personal research. There are, in addition, several temporary instructor positions to teach freshman mathematics for which a master's degree in mathematics is required. Send letter of application, evidence of, or document potential for, outstanding teaching, along with curriculum vitae, and three letters of reference or placement file to Dr. Rick Hathaway, Landrum Box 8093, Georgia Southern College, Statesboro, GA 30460. Deadline: February 1, 1990.

Mathematics / Developmental Studies Positions: Also available are one (possibly two) tenure-track and one (possibly two) non tenure-track (no time limit) joint Mathematics/Developmental Studies positions to teach developmental studies algebra and freshman-level mathematics courses. A master's degree is required and experience is preferred. Send letter of application, curriculum vitae, and three letters of reference or placement file to Ms. Susan Groover, Landrum Box 8093, Georgia Southern College, Statesboro, GA 30460. Deadline: January 8, 1990, for the tenure-track position(s) and January 15, 1990 for the non tenure-track position(s).

General: Georgia Southern College, the largest and most comprehensive of the 15 senior colleges of the University System of Georgia, will be designated Georgia Southern University on July 1, 1990, by recent action of the Board of Regents. Enrollment growth of 72% has been experienced since the fall of 1984 and the current enrollment is 11,245. The 457-acre campus is located in Statesboro, 50 miles northwest of historic Savannah and 200 miles southeast of Atlanta.

All positions are available September 1, 1990. Georgia Southern College is an Affirmative Action, Equal Opportunity Employer which invites and encourages applications from women and minorities.

UNIVERSITY OF WISCONSIN AT PLATTEVILLE
Department of Mathematics
Platteville, WI 53818

Two probationary tenure-track positions in mathematics at the assistant professor level starting August 26, 1990. PhD in mathematics, statistics, or mathematics education preferred although applicants with a Master's degree in mathematics and additional work beyond the Master's degree will be considered. Undergraduate teaching at the freshman and sophomore levels will be the primary responsibility. Therefore, the applicants must furnish evidence of both excellent undergraduate teaching experience and excellent communication skills. The Department of Mathematics is comprised of 21 members who serve a student body of over 5,000 with majors in engineering, Agriculture, Business, Education, and Arts and Sciences. Salary: $26,000–$32,000 depending upon qualifications and experience. An affirmative action, equal opportunity employer. Women and minorities especially are encouraged to apply. Send vita, names, addresses, phone numbers of three references to Dr. Allan Richert, Chairman of Search and Screen, Department of Mathematics, UW-Platteville, Platteville, WI 53818. Deadline: January 12, 1990.

ASSISTANT DEAN

Engineering/Science/Math. Ocean County College seeks applicants for this 12-month position. Master's degree reqd, earned Doctorate desired. 5 yrs teaching exp in appropriate subject area at postsecondary level & demonstrated leadership in educational administration, preferably at dept level, reqd. Send resumé, transcripts, & 3 professional letters of reference to Ocean County College, personnel Dept, CN2001, Toms River, NJ 08754 by 2/2/90. AA/EOE.

UNIVERSITY OF THE DISTRICT OF COLUMBIA
Department of Mathematics

Applications are invited for several regular faculty positions in mathematics from instructor to professor to begin August 16, 1990. Rank and salary ($28,790–$61,985) commensurate with qualifications. Duties and responsibilities include teaching and research in mathematics, student advisement and counseling, and university and community service. The Doctorate in a mathematical science is preferred. Applicants with the Master's degree in mathematics and appropriate experience may be considered for the ranks of instructor or assistant professor. Evidence of a strong dedication to teaching, including the integration of the computer into the curriculum, as well as a continuing interest in research are required. Applications from those with special training and interest in developmental mathematics will also be considered.

Please submit a curriculum vita, undergraduate and graduate transcripts, and three (3) letters of recommendation to: University of the District of Columbia, Office of Personnel, 4200 Connecticut Ave., NW, Washington, DC 20008. ATTN: Ms. Mary Miller.

UDC is an equal opportunity employer—all qualified candidates will receive consideration without regard to race, color, religion, national origin, sex, age, marital status, personal appearance, sexual orientation, family responsibilities, matriculation, political affiliation, physical handicap, source of income, and place of residence or business.

DIRECTOR OF MATH AND SCIENCE EDUCATION CENTER
Northern Illinois University
July 1, 1990

Anticipated tenure-track position in mathematics or science education with major responsibilities as director of a proposed center for Mathematics, Science, and Technology Education. Begin July 1, 1990. Rank and salary open. Doctorate in mathematics or science education, strong academic background in mathematics or a science, commitment to research, curriculum development, teaching and outreach. Preference to candidate with background and experience in application of technology to mathematics or science education. Provide leadership in the start-up, short and long term planning and administration of the proposed center. Credentials, including three letters of reference to J. L. Selfridge, Chair, MSTE Center Search Committee, Department of Mathematical Sciences, Northern Illinois University, DeKalb, IL 60115-2888. Applications will be accepted until November 15, 1989 (this deadline may be extended). (Call 815-753-6725.) EO/AAE.

DEPARTMENT OF MATHEMATICAL SCIENCES
University of Texas at El Paso
Academic Coordinator

Applications are invited for the position of Academic Coordinator in the Mathematical Sciences Department. The Academic Coordinator is responsible for the administration of the department's microcomputer laboratory and associated hardware and software. Candidates should have adequate microcomputer experience and be qualified to teach calculus and precalculus. Master's degree in Mathematical Sciences preferred, or extensive Novelle network experience. Send application, transcript, and arrange for three letters of reference to be sent to Department of Mathematical Sciences, University of Texas at El Paso, El Paso, Texas 79968-0514 (E-mail DSOO@UTEP.BITNET) by December 15 for full consideration. Starting date is January 8, 1990, or earlier by arrangement. The University of Texas at El Paso is an Affirmative Action/Equal Opportunity Employer.

MATHEMATICAL MODELING

The Department of Pure and Applied Mathematics has a permanent, tenure-track position available beginning fall, 1990. Rank and salary are commensurate with qualifications. Applicants must have a demonstrated research ability in Mathematical Modeling. Preference will be given to candidates whose research program complements and supports basic research in the molecular sciences, a broad-based campus-wide research initiative. Applications are especially invited from individuals expert in dynamical systems or reaction-diffusion. A PhD is required, with competence to teach relevant graduate and undergraduate courses. Applicants should send a curriculum vita, a statement of current research and long-term research interests, and three letters of reference by January 15 to: **Prof. Michael Moody, Mathematical Modeling Search Committee, Department of Pure & Applied Mathematics, Washington State University, Pullman, Washington 99164-2930. WSU**

is an EO/AA educator and employer. Protected group members are encouraged to apply.

REPUBLIC OF BOPHUTHATSWANA
Ministry of Economic Affairs

The Republic of Bophuthatswana in Southern Africa is seeking a Demographer and a Chief Statistician to work with the Ministry of Economic Affairs.

CHIEF STATISTICIAN
Qualifications and Experience

1. A holder of a doctorate in Statistics or Macro-Economics or at least a Master's degree in Statistics, and/or Economics, or

2. A good honours degree in Statistics and as a career statistician with at least not less than five (5) years relevant experience, three (3) of which should be in a senior position of a Central Statistical Office of any country.

3. Practical experience in the planning, organization, and implementation of statistical surveys and business/trade censuses is essential.

4. The required person should have a clear view of national data requirements in the various fields of Statistics and economic sectors, both for National and Regional Planning purposes and the practical aspects of meeting those requirements.

5. Computer literacy; at the level of being able to use relevant computer packages.

6. A mature person, preferably not less than 40 years of age and with a high sense of responsibility and good communication skills.

The Job

1. To be appointed as a Chief Government Statistician.

2. This is a highly challenging job which requires a high sense of self-motivation.

3. To set up a full fledged Central Statistical Office for Bophuthatswana which will coordinate the collection, analysis, and dissemination of all government statistics. To be responsible for the launching and release of all Government Statistical Publications, e.g. Abstracts, Bulletins, Periodicals, etc.

4. To be chief advisor of government on all statistical matters and chair the Central Coordinating Committee on Statistics.

5. Within the framework of the Data Base Project, he is to set up a system of data flow from various departments to the Central Statistical office with an ultimate goal of creating a statistical unit within each department, preferably manned by a statistician seconded from the Central Statistical office.

6. To recruit graduates with relevant academic background as Trainee Statisticians and organise on the job training through a series of short practical courses during their probational period, which will enable them to become practical Government Statisticians in their field of specialisation.

7. Be responsible for the initiation of any amendments to the Statistics Act and ultimately be in position to administer the Act.

DEMOGRAPHER
The Person

1. A graduate in Social Sciences with a postgraduate qualification in demography and at least 5 years experience in demographic studies or demographic work situation.

2. Should have experience in conducting Population Census especially in the third world situation.

3. Should have proven qualities of a self-starter.

4. Computer Literacy is an advantage.

The Job

1. He will be head of the Demographic Division in the Statistics Branch.

2. He will be charged with the the planning and implementation of all Population Census and Current Population Surveys to be undertaken by the Department.

3. In charge of compilation of all Demographic reports making projections and maintain an update of the vital Statistics.

4. Provide training to staff under him/her in practical demographic techniques.

Salary

■ Negotiable but market-related and competitive.

Applicants should contact Lonnie P. Calhoun, Educational Liaison, Allpoints International, LTD., 1250 Connecticut Avenue, NW, Suite 319, Washington, DC 20036; (202) 371-6767; FAX: (202) 223-6779.

UNIVERSITY OF ILLINOIS AT CHICAGO

The Department of Mathematics, Statistics, and Computer Science invites applications for positions, effective September 1, 1990, in Mathematics and Computer Science Education.

The Department offers the stimulating environment of a highly rated Mathematics Department with a strong committment to the improvement of pre-college education. It currently has a number of successful programs in the area of pre-college mathematics and computer education. These include undergraduate programs for the certification of elementary and secondary teachers; an MST degree program; a Doctor of Arts program; courses for gifted pre-college students; and extensive teacher in-service continuing education programs.

Applicants must have a doctorate in Mathematics, Mathematics Education, Computer Science, or related field, an outstanding research and publication record, experience in undergraduate and graduate teaching, and previous involvement with teacher education programs. Applications are also invited for visiting positions of 1 or more quarters. Send vita and direct 3 letters of reference to John Baldwin, Chairman, Search Committee, Dept. of Mathematics, Statistics, and Computer Science, Univ. of Illinois at Chicago, Box 4348, Chicago, IL 60680. To ensure full consideration materials must be received by January 15, 1990. AA/EOE.

MATH FACULTY

SUNY Plattsburgh invites applications for a tenure-track position in the Department of Mathematics beginning Fall 1990. Appointment at level of Assistant Professor.

Qualifications: PhD in Mathematics, Mathematics Education, or Statistics.

INDIVIDUALS WITH AN UNDERSTANDING OF AND SENSITIVITY TO MINORITY AND GENDER CONCERNS ARE ENCOURAGED TO APPLY.

SUNY Plattsburgh, a four-year college with approximately 5,500 undergraduates and over 100 math majors, is located in the northeast corner of New York State, on the western shore of Lake Champlain, near the Adirondack Mountains and approximately sixty miles from Montreal.

Closing is January 2, 1990; however applications will be accepted until the position is filled.

Send letter of application, current resumé, and three current letters of recommendation to:

Chair, Search Committee
c/o Office of Personnel/Affirmative Action
SUNY Plattsburgh
Box 1640-152
Plattsburgh, New York 12901

SUNY IS AN EQUAL OPPORTUNITY / AFFIRMATIVE ACTION EMPLOYER

HEAD
Department of Mathematics
and Computer Science
Western Carolina University

Nominations and applications are invited for the position of Head, Department of Mathematics and Computer Science. The department has eighteen full-time faculty members and offers programs leading to the BS, BS Ed, MS, and MA Ed degrees with majors in mathematics, and the BS degree with a major in computer science. Western Carolina University has an enrollment of 6,200 and is a member of the University of North Carolina system. The successful candidate should have a terminal degree, a sustained record of quality teaching, research, and service, and an interest in both undergraduate and graduate program development, as well as administrative experience and/or potential.

Applicants should send a resumé, graduate transcripts, and three letters of reference to: Dr. James H. Horton, Chair, Mathematics and Computer Science Search Committee, School of Arts and Sciences, Western Carolina University, Cullowhee, NC 28723. WCU is an Equal Opportunity/Affirmative Action Employer. Closing date for receipt of applications is March 1, 1990.

Calendar

National MAA Meetings

January 17–20, 1990 73rd Annual Meeting, Louisville, KY (Board of Governors, January 16, 1990)
August 8–11, 1990 66th Summer Meeting, Columbus, OH (Board of Governors, August 7, 1990)
January 16–19, 1991 74th Annual Meeting, San Francisco, CA (Board of Governors, January 15, 1991)

Sectional MAA Meetings

Allegheny Mountain Pennsylvania State University at Dubois, April 6–8, 1990
Florida Valencia Community College (West Campus), Orlando, March 2–3, 1990
Illinois Millikin University, Decatur, April 27–28, 1990
Intermountain Southern Utah State College, Cedar City, April 6–7, 1990
Iowa Iowa State University, Ames, April 6–7, 1990
Kansas Kansas State University, Manhattan, March 30–31, 1990
Kentucky Berea College, Berea, April 6–7, 1990
Louisiana and Mississippi McNeese State University, Lake Charles, LA, February 23–24, 1990
Maryland–District of Columbia–Virginia Frostburg State University, Frostburg, MD, April 28, 1990
Metropolitan New York New York City Technical College–CUNY, Brooklyn, May 6, 1990
Michigan University of Michigan, Flint, May 11–12, 1990
Missouri School of the Ozarks, Point Lookout, April 6–7, 1990
Nebraska University of Nebraska–Omaha, April 6–7, 1990
Northeastern Roger Williams College, Bristol, RI, June 8–9, 1990
Northern California The Naval Postgraduate School, Monterey, February 24, 1990
Ohio University of Cincinnati, April 27–28, 1990
Oklahoma-Arkansas John Brown University, Siloam Springs, AR, March 30–31, 1990
Pacific Northwest Portland State University, Portland, OR, June 14–16, 1990
Rocky Mountain University of Wyoming, Laramie, April 6–7, 1990
Seaway Colgate University, Hamilton, NY, April 6–7, 1990
Southeastern Davidson College, Davidson, NC, April 6–7, 1990
Southern California UCLA, November 18, 1989
Southwestern Arizona State University, Tempe, Spring 1990
Texas North Texas State University, Denton, April 5–7, 1990
Wisconsin University of Wisconsin–Richland, April 20–21, 1990

Other Meetings

December 11–13 Fourth SIAM Conference on Parallel Processing for Scientific Computing, Hyatt Regency Hotel, Chicago, IL. Organizer: Jack J. Dongarra, Argonne National Laboratory. For information, contact: SIAM Conference Coordinator, 3600 University City Science Center, Philadelphia, PA 19104-2688.

January 3–5 International Symposium on Artificial Intelligence and Mathematics, Fort Lauderdale, FL. Keynote Speaker: David Mumford, Harvard University, "Finding Discrete Structure in a Noisy Analogue World." Includes five, invited, hour speakers, contributed papers, and sessions organized by program committee members (chair: Martin Golumbie, IBM Science and Technology, Haifa, Israel. For information, contact: Frederick Hoffman, Organizing Chair, Department of Mathematics, Florida Atlantic University, Boca Raton, FL 33431; (407) 367-3345; hoffmanf@servax.bitnet.

January 9–13 The Mathematical Sciences Institute (MSI) at Cornell University Workshop on Stable Processes and Related Topics. For program information, contact: G. Samorodnitsky, School of Operations Research and Industrial Engineering, Cornell University, Upson Hall, Ithaca, NY 14853, (607) 255-9141. To attend, contact: Diana Drake, MSI, Cornell University, 201 Caldwell Hall, Ithaca, NY 14853-2602; (607) 255-7740.

January 22–24 ACM/SIAM Symposium on Discrete Algorithms, Cathedral Hill Hotel, San Francisco, CA. Organizers: Fan R. K. Chung, Bell Communications Research, Inc., and David Johnson, AT&T Bell Laboratories. For information, contact SIAM at address above (December 11–13).

January 25–26 The Bard Center's Annual Conference for High School and College Educators: "Solve for X: Practical Solutions to Teaching Math and Science in American Schools and Colleges." For information, contact: Amie McEvoy, Bard College, Annandale-on-Hudson, New York 12504; (914) 758-6822.

March 1–4 Mathematics and Education Reform (MER) Network Workshop, Ohio State University, Columbus. Presentations by mathematicians who have developed "exemplary projects," especially at the elementary and high school level. Participation limited to 40 people. Grant funds will cover accommodations, meals, and materials for 30 participants. Limited travel grants also available. For information, contact: Naomi Fisher, Associate Director, MER Network, University of Illinois at Chicago, Office of Mathematics and Computer Education (M/C 249), Box 4348, Chicago, IL 60680; (312) 996-2439; bitnet U37158@UICVM.

March 5–7 SIAM Conference on Applied Probability in Science and Engineering, Clarion Hotel, New Orleans, LA. Organizers: Bernard Matkowsky, Northwestern University, and James McKenna, AT&T Bell Laboratories. For information, contact SIAM at address above (December 11–13).

March 29–31 The Mathematical Sciences Institute (MSI) Conference on "Modern Perspectives of Mathematics: Mathematics as a Consumer Good, Mathematics in Academia," Statler Hotel, Cornell University. The conference will addresss how to develop mathematics education and research to encourage the interplay of mathematics and its applications in business, industry, and government. For information, contact: Diana Drake at MSI address above (January 9–13).

April 20–22 New York State Mathematics Association of Two-Year Colleges (NYSMATYC) 1990 Annual Meeting, Holiday Inn Arena, Binghamton. For information, contact: Sadie Bragg, Department of Mathematics, Borough of Manhattan Community College, 199 Chambers Street, New York, NY 10007.