

AWM

ASSOCIATION FOR WOMEN IN MATHEMATICS

Volume 32, Number 5

NEWSLETTER

September–October 2002

PRESIDENT'S REPORT

Hello to all AWM members!

We are making a special membership offer to new members this year—a one-year membership for \$30. Please try to recruit a few new members from your colleagues. You might also consider giving gift memberships to some of your students at \$15 each. Of course, we appreciate the ongoing support of continuing members.

We have agreed to be a partner in the new National Center for Women in Science, Technology, Engineering and Mathematics. The goal of these partnerships is to maximize the impact of work being done by established organizations to advance the involvement of women and girls in science, technology, engineering and mathematics. This partnership will enable us to develop collaborative initiatives with other center partners. I hope that these collaborations will improve our outreach efforts. The Center has been holding meetings in the Bay Area of California and is expected to be located at NASA – Ames. Other partners include the Association for Women in Science, the Society of Women Engineers and the Math/Science Network. You will be hearing more about this as collaborations develop. The Center was incorporated as a nonprofit organization in May 2001. You may obtain more information about the Center and its agreement of cooperation with NASA at www.ncwstem.org and researchpark.arc.nasa.gov/News/NewsReleases/WomenSTEMMar02.html. We would like to thank Cathy Kessel for facilitating our partnership in this center.

We were delighted to participate in the SIAM 50th Anniversary Meeting in Philadelphia, July 8–12. See the article on pages 13–15 about the AWM activities there; there are photos on pages 26–29.

In August, AWM activities took place at the MAA Mathfest in Burlington, Vermont, and the International Congress of Mathematicians in Beijing, China. Reports on these activities will appear in the next *Newsletter*.

IN THIS ISSUE

- 3 In Memoriam: Mary Glazman

- 4 AMS Election

- 13 AWM Workshop

- 17 Education Column

- 22 Work and Family Life

AWM
 ASSOCIATION
 FOR WOMEN IN
 MATHEMATICS

The Association was founded in 1971 at the Joint Meetings in Atlantic City. The purpose of the association is to encourage women to study and to have active careers in the mathematical sciences. Equal opportunity and the equal treatment of women in the mathematical sciences are promoted.

The *Newsletter* is published bi-monthly. The Editor welcomes articles, letters, and announcements.

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Please consider making nominations for the Alice T. Schafer Prize for female undergraduate math majors and the Louise Hay Award in mathematics education; those deadlines are October 1st. We frequently get questions about eligibility for the Hay Award; educators at all levels are eligible for nomination. We will be having our Essay Contest on Biographies of Contemporary Women in Mathematics again this fall with a deadline of November 1st; see page 16 for contest rules. Our first contest was very successful and you should encourage your students to write a biography for this contest.

Catherine Roberts and Jodie Novak will be organizing the workshop for the 2003 January Joint Meetings. If you are interested in being a mentor for this workshop, contact Catherine at croberts@holycross.edu. See page 12 for the announcement requesting applications for the workshop to be held in conjunction with next year's SIAM annual meeting.

We gratefully acknowledge a recent grant from the ExxonMobil Foundation. We appreciate the continuing support from this foundation for our activities.

Contact me at lenhart@math.utk.edu if you have any suggestions or ideas about AWM activities.

Suzanne Lenhart

Suzanne Lenhart
 University of Tennessee and
 Oak Ridge Laboratory
 July 29, 2002



IN MEMORIAM: MARY GLAZMAN, MEXICO

It was with shock and sadness that I learned that Mary Glazman of the National Autonomous University of Mexico (UNAM) died of cancer in August 2000. I had the opportunity to get to know her at the ICM, Berlin, 1998, where she participated in the AWM panel organized by Christine Bessenrodt, Bettye Anne Case and myself. She was a vibrant, energetic and enthusiastic member of the panel and gave a thoughtful, moving presentation on some of the problems faced by women mathematicians in Mexico. Her talk was published in the *AWM Newsletter*, September–October 1999, pp. 20–23. In particular, these were some of her observations:

Around 1983 or 1984, when the crisis in the academic world was reaching its peak, an effort made by an important group of researchers, particularly scientists, brought about a response: the establishment of a national system of research (in Spanish: Sistema Nacional de Investigadores) better known as SNI. Under this system, everyone who wanted to participate had to prove to a special committee that they were qualified to be included in it.... Mathematics was put together with Physics....

There has never been a woman referee on the SNI Math Committee. Women's vision has not been taken into account. Women's lines of thought have not been considered. It is more difficult for a woman to confront this type of committee and fight for her rights, at least in Mexico, undoubtedly due to the long tradition of cultural conventions in this regard. In the long run, this will change as more women are involved in mathematical work. But so far, there is still a big gap in how women are evaluated.... According to the catalogue of human resources 22 per cent of all mathematicians who are members of the SMM (Mexican Math Society) are women.

Clearly Mary felt strongly about the obstacles facing women mathematicians in Mexico. Indeed, as Ann Koblitz writes in her obituary of Mary in the

Bhama Srinivasan, University of Illinois at Chicago

MEMBERSHIP AND NEWSLETTER INFORMATION

Membership dues

Individual: \$50 Family (no newsletter): \$30
 Contributing: \$100 Retired, part-time: \$25
 Student, unemployed, developing nations: \$15
 Friend: \$1000 Benefactor: \$2500
 All foreign memberships: \$8 additional for postage
 Dues in excess of \$15 and all contributions are deductible from federal taxable income.

Institutional Members:

Level 1: \$250

Level 2a: \$125

Level 2b: \$125

See <http://www.awm-math.org> for details on free ads, free student memberships, and ad discounts.

Affiliate Members: \$250

Institutional Sponsors:

Friend: \$1000+

Patron: \$2500+

Benefactor: \$5000+

Program Sponsor: \$10,000+

See the AWM website for details.

Subscriptions and back orders

All members except family members receive a subscription to the newsletter as a privilege of membership. Libraries, women's studies centers, non-mathematics departments, etc., may purchase a subscription for \$50/year (\$58 foreign). Back orders are \$6/issue plus shipping/handling (\$5 minimum).

Payment

Payment is by check (drawn on a check with a U.S. branch), U.S. money order, or international postal order. Cash payment will be accepted if necessary, but only in U.S. currency.

Newsletter ad information

AWM will accept advertisements for the *Newsletter* for positions available, programs in any of the mathematical sciences, professional activities and opportunities of interest to the AWM membership and other appropriate subjects. The Director of Marketing, in consultation with the President and the Newsletter Editor when necessary, will determine whether a proposed ad is acceptable under these guidelines. *All institutions and programs advertising in the Newsletter must be Affirmative Action/Equal Opportunity designated.* Institutional members receive discounts on ads; see the AWM website for details. For non-members, the rate is \$100 for a basic four-line ad. Additional lines are \$6 each. See the AWM website for *Newsletter* display ad rates.

Newsletter deadlines

Editorial: 24th of January, March, May, July, September, November

Ad: 1st of February, April, June, August, October, December

Addresses

Send all **Newsletter** material **except ads and material for book review and education columns** to Anne Leggett, Math Dept., Loyola University, 6525 N. Sheridan Road, Chicago, IL 60626; email: leggett@math.luc.edu; phone: 773-508-3554; fax: 773-508-2123. Send all **book review** material to Book Review Editor, AWM, 4114 CSS Building, University of Maryland, College Park, MD 20742-2461 and all **education column** material to Ginger Warfield, Math Dept., University of Washington, Seattle, WA 98195; email: warfield@math.washington.edu. Send everything else, **including ads and address changes**, to Dawn V. Wheeler, 4114 CSS Building, University of Maryland, College Park, MD 20742-2461; phone: 301-405-7892; email: awm@math.umd.edu.

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Online Ads Info

Classified and job link ads may be placed at the AWM website. Detailed information may be found there.

Website and Online Forums

<http://www.awm-math.org>

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AWM-Net

To subscribe, send mail to awm-net-request@cs.umd.edu and include your email address; AWM members only.

AWM DEADLINES

NSF-AWM Travel Grant: October 1, 2002
February 1 and May 1, 2003

Alice T. Schafer Prize for Undergraduate Women: October 1, 2002

Louise Hay Award for Contributions to Mathematics Education: October 1, 2002

2004 Noether Lecturer Nominations:
October 15, 2002

AWM Essay Contest: November 1, 2002

AWM Workshop, July 2003:
January 24, 2003

NSF-AWM Mentoring Travel Grant:
February 1, 2003

Sonia Kovalevsky High School Mathematics Days: February 5, 2003

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Kovalevskia Fund Newsletter (July 2002), she was one of the founders of *Supercuerdas: Boletín Para la Mujer de la Ciencia*, a journal for women scientists. To quote Koblitz, "Women scientists throughout the Spanish-speaking world look to the journal as a source of inspiration, information, and networking opportunities."

AMS ELECTION

All persons standing for election for contested office in the American Mathematical Society (AMS) were asked to submit statements. The 2002 AMS Elections Special Section in the September *Notices* is also worth reading before you cast your ballot; it contains biographical information on the candidates, photographs of most of them, and statements (which in many cases are identical to those below).

M. Salah Baouendi, Barbara L. Osofsky, and Karen Vogtmann were nominated for Vice-President, one to be elected for a term of three years. Carl Pomerance and Jean E. Taylor were nominated for Trustee, one to be elected for a term of five years. The candidates for Member-at-Large of the Council are: Karen M. Brucks, Carlos Castillo-Chavez, Susan M. Hermiller, Henry B. Laufer, Brian Marcus, John E. McCarthy, David W. McLaughlin, Yair N. Minsky, Paul J. Sally, Jr., and Paul Zorn. Five will be elected to serve terms of three years. Candidates for the Nominating Committee are: Francis Bonahon, David M. Bressoud, Constantine M. Dafermos, Nathaniel Dean, Richard M. Hain, and Krystyna M. Kuperberg. Three will be elected for terms of three years. Richard A. Brualdi, Cristian E. Gutierrez, Svetlana R. Katok, and Leonard L. Scott, Jr., have been nominated for the Editorial Boards Committee; two will be elected for terms of three years.

VICE-PRESIDENT**M. Salah Baouendi, Professor of Mathematics,
University of California, San Diego**

The American Mathematical Society should continue to play a fundamental role in maintaining the health of the mathematical enterprise in the US and throughout the world. This role has many different important aspects.

First, the Society must continue to promote excellence in research by staying in the forefront of publication of affordable, high quality journals and books at all levels, sponsoring and encouraging scientific

K. Renee Fister, AWM Clerk

meetings and conferences, and facilitating the rapid communication and dissemination of new mathematical research around the globe.

Second, the Society must help the profession continue to attract the most talented young people from a wide variety of backgrounds by increasing and promoting their career opportunities at all levels.

Third, in collaboration with other scientific societies, the AMS should continue to play an active role in public awareness, both with government agencies as well as with the public at large.

Finally, the Society must work to assure that the profession maintains the highest level of integrity and accountability.

**Barbara L. Osofsky, Professor of Mathematics,
Rutgers University**

In my view, the strength of a professional organization such as the AMS lies in its membership. The AMS has an excellent publication program which serves research mathematics well. It is a global organization with a large number of foreign reciprocity members. But sometimes these aspects swamp out the needs of its North American membership. Servicing the needs of these members and attracting and keeping such regular dues paying members should be a prime function of the AMS. Here I would like to focus on one particular place where I feel the AMS falls down in servicing some of these American members and potential members. Consider access to MathSciNet. Currently that invaluable service is completely divorced from membership in the

AMS. If any mathematician, AMS member or not, is employed by, or has internet access through, an institution or consortium that subscribes to MathSciNet, he or she has complete access. Presently there are no individual subscriptions. For all practical purposes MathSciNet is unavailable to an AMS member who is self-employed, unemployed, or is affiliated with an institution that never has subscribed and in all likelihood never will subscribe. Surely the AMS can set up a method whereby such members can get access to MathSciNet at a reasonable cost. Are there really a large number of institutional subscribers who would drop their subscriptions to MathSciNet expecting their employees, students, and visitors to pay for this service? Would it be so bad if some currently unaffiliated mathematicians who do not get MathSciNet at work joined us as members so they could access MathSciNet? What other services can the AMS offer that would not harm the organization financially but would attract more American members from both traditional and nontraditional sources of people interested in supporting research mathematics in this country?

**Karen Vogtmann, Professor of Mathematics,
Cornell University**

The primary mission of the American Mathematical Society is to support research mathematics and the community of research mathematicians. It does this through its publications programs, meetings and conferences, employment services, and awarding of prizes and fellowships.

CALL FOR NOMINATIONS: LOUISE HAY AWARD

The Executive Committee of the Association for Women in Mathematics has established the Louise Hay Award for Contributions to Mathematics Education, to be awarded annually to a woman at the Joint Prize Session at the Joint Mathematics Meetings in January. The purpose of this award is to recognize outstanding achievements in any area of mathematics education, to be interpreted in the broadest possible sense. The annual presentation of this award is intended to highlight the importance of mathematics education and to evoke the memory of all that Hay exemplified as a teacher, scholar, administrator, and human being.

The nomination documents should include: a one to three page letter of nomination highlighting the exceptional contributions of the candidate to be recognized, a curriculum vitae of the candidate not to exceed three pages, and three letters supporting the nomination. It is strongly recommended that the letters represent a range of constituents affected by the nominee's work. Five complete copies of nomination materials for this award should be sent to: The Hay Award Selection Committee, Association for Women in Mathematics, 4114 Computer & Space Sciences Building, University of Maryland, College Park, MD 20742-2461. Nominations must be received by **October 1, 2002**. For more information, phone (301) 405-7892, email awm@math.umd.edu or visit www.awm-math.org. Nominations via email or fax will not be accepted.

In recent years the AMS has taken new initiative in areas including Washington politics, public awareness of mathematics, and K–12 education. The efforts in Washington have had a significant impact on recent increases in federal funding for mathematics. The materials and ideas produced by the new public awareness office, advertising the importance and pervasiveness of mathematics in modern life, are impressive and are being used in schools and the media.

The research community has a direct interest in improving K–12 education and should continue to investigate ways to support and to positively affect mathematics education in schools. The new AMS Young Scholars Program gives needed support to summer programs for talented high school students; historically, these have influenced the mathematics research community both by attracting talented students to research and by fostering respect for mathematical research in young people who ultimately choose other careers.

I strongly support all of these new initiatives, but will also work to insure that the AMS is not distracted from its basic functions, and that it continues efforts to ensure that mathematicians from underrepresented groups have equal access to mathematical ideas and equal opportunities for professional advancement.

TRUSTEE

Carl Pomerance, Member of Technical Staff, Bell Labs, Lucent Technologies

I enthusiastically support efforts of the Society to encourage talented and diverse people to join our profession, to facilitate widespread access to vital research tools, to publish high quality journals and books, to communicate effectively to nonmathematicians, and to run worthwhile and exciting meetings. To the fullest extent possible, I will let these thoughts guide me as a trustee.

Jean E. Taylor, Professor of Mathematics, Rutgers University

When I got my Ph.D., basic mathematics seemed to be more highly regarded amongst mathematicians; now, applied mathematics is on the ascendancy. All mathematics research is valuable: mathematics needs to interact with the rest of the world and also to move to its

own internal music. Mathematicians must also attend to education, both for the next generation of mathematicians and for developing an appreciation for mathematics and its uses among the general population. Individual mathematicians, influenced but not driven by current enthusiasms, choose the problems that interest them most; these can vary greatly at different points in their careers.

More than any other body, the American Mathematical Society attends to the health of mathematics, and the Board of Trustees of the AMS attends to the health of the AMS. I believe that my extensive experience within the AMS and on boards of other scientific and educational organizations (e.g. AAAS Board and AWM President), together with my commitment to working on the leaky pipeline for women in mathematics, positions me well to serve the AMS in this vital capacity.

MEMBER AT LARGE OF COUNCIL

Karen M. Brucks, Chair and Associate Professor, Mathematical Sciences Department, University of Wisconsin – Milwaukee

The goals and recommendations of the AMS National Policy Statement include: excellence in mathematical sciences research; connecting mathematics to problems in science, technology, and society; strengthening all levels of mathematics education; and communicating the nature of mathematics and its contributions to society. Moreover, the interdependency of research within the mathematical sciences, applications of mathematics to other disciplines, and the teaching of mathematics is affirmed in the policy statement.

Achieving these goals is a challenge members from academia, government, private industry/business, and the community collaboratively enjoy. As a member of the Council, I would bring my experiences at an urban research university to this challenge.

Carlos Castillo-Chavez, Professor of Biomathematics, Cornell University

As a Member at Large I will: (i) promote the fundamental role of mathematics in interdisciplinary research; (ii) work to make the AMS an even more welcoming organization for women and underrepresented minorities; (iii) increase the support for undergraduate

mathematics research; (iv) support the direct recognition of outstanding teachers and mentors by AMS; and (v) enhance the involvement of AMS in the "final" frontier, biology.

Susan M. Hermiller, Associate Professor of Mathematics, University of Nebraska – Lincoln

The AMS has the primary role of furthering the mathematics profession and research in mathematics, through a wide variety of avenues. In direct promotion of research through organization of conferences and publications, the society needs to work to keep up with electronic publication issues and to ensure that its publications are widely accessible. In an economy that has faltered in the past year or two, there is increased importance for the AMS efforts to lobby for funding with government policy makers, to increase public awareness of the value of mathematics, and to promote education and employment opportunities for young

mathematicians. In addition to monitoring employment of new Ph.D.'s, we should also attempt to track Ph.D.'s several years past graduation to study their more permanent job status. We must also work to improve the representation of women and minorities in our profession.

The AMS serves as a forum for the discussion of many issues that arise in our profession. I would appreciate the opportunity to help advance the mission of our society and contribute further to these discussions.

Henry B. Laufer, Vice President for Research, Renaissance Technologies Corporation

I was a professor in the mathematics department at SUNY at Stony Brook until 1991. Then I left to join the financial world, where I now help to run a hedge fund. If elected, I would bring a different, nonacademic viewpoint to the Council. In particular, I feel that the Society should care much more about mathematicians in exchange for caring somewhat less about mathematics.

NSF-AWM MENTORING TRAVEL GRANTS FOR WOMEN

The objective of the NSF-AWM Mentoring Travel Grants is to help junior women to develop a long-term working and mentoring relationship with a senior mathematician. This relationship should help the junior mathematician to establish her research program and eventually receive tenure. AWM expects to award up to seven grants, in amounts up to \$4000 each. Each grant will fund travel, accommodations, and other required expenses for an untenured woman mathematician to travel to an institute or a department to do research with a specified individual for one month. Awardees may request to use any unexpended funds for further travel to work with the same individual during the following year. In such cases, a formal request must be submitted by the following February 1st to the selection committee, or the funds will be released for reallocation. (Applicants for mentoring travel grants may in exceptional cases receive two such grants throughout their careers, possibly in successive years; the second such grant would require a new proposal and would go through the usual competition.) For foreign travel, US air carriers must be used (exceptions only per federal grant regulations; prior AWM approval required).

Eligibility. Applicants must be women holding a doctorate or equivalent experience and with a work address in the US (or home address if unemployed). The applicant's research may be in any field that is supported by the Division of Mathematical Sciences of the National Science Foundation.

Each applicant should submit *five copies* of each of the following: 1) a cover letter (indicate if previous AWM-NSF mentor grant has been awarded); 2) a curriculum vita; 3) a research proposal, approximately five pages in length, which specifies why the proposed travel would be particularly beneficial; 4) a supporting letter from the proposed mentor (who must indicate his/her availability at the proposed travel time), together with the curriculum vita of the proposed mentor; 5) a proposed budget; and 6) information about other sources of funding available to the applicant.

A final report will be required from each awardee. All awards will be determined on a competitive basis by a selection panel consisting of distinguished mathematicians appointed by the AWM.

Send *five* complete copies of the application materials (including the cover letter) to: Mentoring Travel Grant Selection Committee, Association for Women in Mathematics, 4114 Computer & Space Sciences Building, University of Maryland, College Park, MD 20742-2461. If you have questions, contact AWM by phone (301-405-7892) or email (awm@math.umd.edu). Applications via email or fax will not be accepted. The deadline for receipt of applications is **February 1, 2003**.

**Brian Marcus, Research Staff Member,
IBM Almaden Research Center**

If elected, I would bring to the AMS Council the voice of a mathematician who has broad experience in both academia and industry. Through this experience, I have seen first-hand how industry can benefit from mathematics and how mathematical research can benefit from contact with applications. Also, I understand the difficulties faced by mathematicians in industry as well as the challenges that face our community in preparing mathematics students to succeed in both academic and industrial environments. I would try to use the influence of the AMS to increase interactions among academia, industry and government as a means of strengthening mathematics research and education.

**John E. McCarthy, Professor of Mathematics,
Washington University**

I love mathematics. Mathematics and its associated culture is vast, however, and the AMS should not seek to encompass it all. I believe the principle function of the AMS should be to support research in mathematics.

Although this statement of belief is simple, it has ramifications beyond the obvious ones of organizing meetings and attempting to obtain financial support for researchers. For example, research in mathematics is enhanced by the ready availability of research literature. It is therefore important that the AMS remain a major

publisher of mathematics: both as a source of high quality and reasonably priced journals and books, and also as a moderating influence on commercial publishers of mathematics. Likewise, it should pioneer paradigms of electronic journals that maximize benefit to the users rather than to the publishers.

I believe that the American Mathematical Society has done a good job of serving the interests of mathematics. If elected, I shall strive to ensure that it continues to do so. What I lack in experience, I shall make up for with enthusiasm.

**David W. McLaughlin, Provost, New York
University, and Professor of Mathematics and Neural
Science, Courant Institute of Mathematical Sciences,
New York University**

The AMS fosters excellence in research and education throughout mathematics, and it represents its members on these and other concerns of our profession. The primary focus of the society should be upon research and education within our discipline.

At this turn of the century, the society should also focus upon the fundamental role that mathematics can play in modern science, technology, and throughout society—in that it can provide language, methods and viewpoints toward the solution of complex interdisciplinary and multi-disciplinary problems. In addition, today there are many other important and difficult issues which the AMS addresses, including: Federal support of basic

CALL FOR NOMINATIONS: ALICE T. SCHAFER MATHEMATICS PRIZE

The Executive Committee of the Association for Women in Mathematics calls for nominations for the Alice T. Schafer Mathematics Prize to be awarded to an undergraduate woman for excellence in mathematics. All members of the mathematical community are invited to submit nominations for the Prize. The nominee may be at any level in her undergraduate career, but must be an undergraduate as of October 1, 2002. She must either be a U.S. citizen or have a school address in the U.S. The thirteenth annual Schafer Prize will be awarded at the Joint Prize Session at the Joint Mathematics Meetings in Baltimore, Maryland, January 15–18, 2003.

The letter of nomination should include, but is not limited to, an evaluation of the nominee on the following criteria: quality of performance in advanced mathematics courses and special programs, demonstration of real interest in mathematics, ability for independent work in mathematics, and performance in mathematical competitions at the local or national level, if any.

With letter of nomination, please include a copy of transcripts and indicate undergraduate level. Any additional supporting materials (e.g., reports from summer work using math, copies of talks given by members of student chapters, recommendation letters from professors, colleagues, etc.) should be enclosed with the nomination. Send *five* complete copies of nominations for this award to: The Alice T. Schafer Award Selection Committee, Association for Women in Mathematics, 4114 Computer & Space Sciences Building, University of Maryland, College Park, MD 20742-2461. Nominations must be received by **October 1, 2002**. If you have questions, phone 301-405-7892 or email awm@math.umd.edu or visit www.awm-math.org. Nominations via email or fax will not be accepted.

research, postdoctoral and graduate education, conferences and institutes; Undergraduate and graduate education; Elementary and secondary school education; Diversity within our community; Human rights; Opportunities within the profession; AMS meetings and their technical content; The perception of the discipline; and many more. It would be an honor to help address these issues as a Council Member at Large.

**Yair N. Minsky, Associate Professor of Mathematics,
SUNY at Stony Brook**

An AMS Regional Conference in Arcata in 1989 was my first intensive introduction to the communal spirit of research mathematics. Since then, AMS meetings and publications have played a large role in my development as an individual mathematician and as a member of the community, and I think they remain the major way in which the Society promotes high quality research and

education, and communication among its members. Additionally the AMS has been strongly involved in outreach, advocacy and professional support for mathematicians. All of us should at some point make time from our research and educational activities to become involved in these important endeavors. Of particular interest to me are maintaining the excellent level of meetings, improving the interaction between pure and applied mathematics, and building on the Society's successes in online publishing and other services.

**Paul Zorn, Professor of Mathematics,
Saint Olaf College**

While the AMS properly emphasizes the promotion of mathematical research as its principal mission, other activities and concerns are also important, both in their own right and in maintaining our profession's vitality—and hence, indirectly, its success in research and other

SONIA KOVALEVSKY HIGH SCHOOL MATHEMATICS DAYS

Through grants from Coppin State College and the National Security Agency (NSA), the Association for Women in Mathematics expects to support (*pending final funding approval*) Sonia Kovalevsky High School Mathematics Days at colleges and universities throughout the country. Sonia Kovalevsky Days have been organized by AWM and institutions around the country since 1985, when AWM sponsored a symposium on Sonia Kovalevsky. They consist of a program of workshops, talks, and problem-solving competitions for high school women students and their teachers, both women and men. The purposes are to encourage young women to continue their study of mathematics, to assist them with the sometimes difficult transition between high school and college mathematics, to assist the teachers of women mathematics students, and to encourage colleges and universities to develop more extensive cooperation with high schools in their area.

AWM anticipates awarding approximately 10 grants of up to \$3000 each to universities and colleges; more grants may be awarded if additional funds become available. Historically Black Institutions and women's colleges are particularly encouraged to apply. Programs targeted towards inner city or rural high schools are especially welcomed. If selected, institutions will receive an information packet consisting of model schedules of activities, a check list for the sorts of arrangements that need to be made, suggestions for securing additional funding and for obtaining prizes to be awarded to contest winners, recruitment and publicity material to be adapted for local use, lists of possible workshop topics for students and teachers, model problem solving contest material, and guidelines for follow-up activities and evaluation.

Applications, not to exceed five pages, should include: a) tentative plans for activities, including specific speakers to the extent known; b) qualifications of the persons to be in charge; c) plans for recruitment, including the securing of diversity among participants; d) itemized budget; e) local resources in support of the project, if any; and f) tentative follow-up and evaluation plans. The decision on funding will be made late February to early March. The high school days are to be held in Spring 2003 or Fall 2003. If selected, a report of the event along with receipts (originals or copies) for reimbursement must be submitted to AWM within 30 days of the event date or by December 1, 2003, whichever comes first. Reimbursements will be made in one disbursement; no funds can be disbursed prior to the event date.

Send *five* complete copies of the application materials to: Sonia Kovalevsky Days Selection Committee, Association for Women in Mathematics, 4114 Computer & Space Sciences Building, University of Maryland, College Park, Maryland 20742-2461. For further information: phone, 301-405-7892; email, awm@math.umd.edu; URL: <http://www.awm-math.org>. Applications must be received by **February 5, 2003**; applications via email or fax will not be accepted.

efforts. If elected a trustee, I hope to contribute to the AMS in two main areas: (i) promoting excellent undergraduate mathematics education—especially in preparation for graduate work; and (ii) communicating AMS activities and their importance to constituencies beyond the traditional AMS orbit, including the general public. Both of these interests are closely related to my own work and recent experience as an undergraduate teacher, mathematical expositor, and journal editor.

NOMINATING COMMITTEE:

**Francis Bonahon, Professor of Mathematics,
University of Southern California**

The selection of officers and committee members for the Society should fulfill two basic goals: action and representation. It is important to attract to the leadership of the Society talented and dedicated individuals who will energetically promote the cause of mathematics. It is equally important that the persons nominated offer a wide representation of the very diverse spectrum of the

mathematical community. This second point serves a dual purpose: maintaining accountability of the Society to its membership, but also making the community better aware of what the AMS does (including what it does well). If elected, I intend to use these two principles to guide my work on the Committee.

**David Bressoud, DeWitt Wallace Professor of
Mathematics, Macalester College**

The AMS serves all mathematicians. I will work to include good candidates from all constituencies. It is especially important to include mathematicians who are not at major research universities.

**Nathaniel Dean, Associate Professor of Mathematics,
Rice University**

When I studied mathematics as a boy it seemed like a bunch of puzzles that were usually not too difficult to solve. Later, I came to view it as a logical, symbolic language that I could use to describe physical systems and

NSF-AWM TRAVEL GRANTS FOR WOMEN

The objective of the NSF-AWM Travel Grants program is to enable women to attend research conferences in their fields, thereby providing a valuable opportunity to advance their research activities and their visibility in the research community. By having more women attend such meetings, we also increase the size of the pool from which speakers at subsequent meetings may be drawn and thus address the persistent problem of the absence of women speakers at some research conferences.

Travel Grants. These grants provide full or partial support for travel and subsistence for a meeting or conference in the applicant's field of specialization. A maximum of \$1000 for domestic travel and of \$2000 for foreign travel will be applied. For foreign travel, US air carriers must be used (exceptions only per federal grants regulations; prior AWM approval required).

Eligibility. These travel funds are provided by the Division of Mathematical Sciences of NSF, and the research conference must be in an area supported by DMS. For example, this includes certain areas of statistics, but excludes most areas of mathematics education and history of mathematics. Applicants must be women holding a doctorate (or equivalent experience) and having a work address in the US (or home address, in the case of unemployed mathematicians). Anyone who has been awarded an AWM-NSF travel grant in the past two years is ineligible. Anyone receiving external governmental funds which includes significant funding (more than \$1000 yearly) for travel is ineligible. Partial travel support from the applicant's institution or from a non-governmental agency does not, however, make the applicant ineligible.

Target dates. There are three award periods per year. An applicant should send *five* copies of 1) a cover letter, including the conference name, conference dates and location (city/state/country), and amount of support requested, 2) a description of her current research and of how the proposed travel would benefit her research program, 3) her curriculum vitae, 4) a budget for the proposed travel, and 5) a list of all current and pending travel funding (governmental and non-governmental) and the amounts available for your proposed trip to: Travel Grant Selection Committee, Association for Women in Mathematics, 4114 Computer & Space Sciences Building, University of Maryland, College Park, MD 20742-2461. If you have questions, contact AWM by phone (301-405-7892) or email (awm@math.umd.edu). Applications via email or fax will not be accepted. The next three deadlines for receipt of applications are **October 1, 2002, February 1, 2003, and May 1, 2003.**

ideas. The problems became more difficult to solve, they required knowledge of other sciences (e.g., physical, social and biological), and the conclusions were not so infallible. For me now, the main challenge of mathematics is to demonstrate its power as an everyday decision making tool and to prove its effectiveness in helping us manage those things most dear to us—our lives and our environment. Mathematics is for life.

**Richard M. Hain, Professor of Mathematics,
Duke University**

The purpose of the Nominating Committee is to nominate strong and committed candidates for election to important elected offices of the Society, including President-elect, Vice President, and Trustee. If elected, I will seek to identify candidates who will represent the broad interests of the Society, and who will work hard for, and be responsive to, the mathematical community.

**Krystyna M. Kuperberg, Professor of Mathematics,
Auburn University**

The American Mathematical Society was founded in 1888 to further mathematical research and scholarship. For over 100 years the AMS has been upholding its primary mission. Closely working with other mathematical organizations in the United States or abroad, the AMS is seen as the leading representative of the mathematical community. As a member of the nominating committee I would support nominations from all areas of mathematics of high quality research mathematicians dedicated to the Society's purpose.

EDITORIAL BOARDS COMMITTEE

**Richard A. Brualdi, Professor of Mathematics,
University of Wisconsin**

I currently serve as one of three editors-in-chief of the journal *Linear Algebra and its Applications* and one of four editors-in-chief of the *Electronic Journal of Combinatorics*. I am also a member of the editorial boards of several other journals. I hope to use this experience in serving the AMS through its Editorial Boards Committee.

**Leonard L. Scott, Jr., McConnell/Bernard Professor
of Mathematics, University of Virginia**

An AMS editor must have personal integrity and a broad view of mathematics. He or she must be able to disagree without acrimony, to cooperate without compromising standards. As chairman of the editorial board of the AMS University Lecture Series during most of the nineties, I guided that series through a very formative time and oversaw a 100% rotation in its editorial board. I know what an AMS editor faces and have experience in suggesting and evaluating editorial appointees.

EYH ALUMNAE SURVEY

Since the first Expanding Your Horizons in Science and Mathematics conference in 1976, thousands of conferences, licensed and coordinated by the Math/Science Network and staged by grassroots volunteers, have delighted and inspired over 550,000 young women in 6th through 12th grade.

As we begin our 28th year of conferences, we would like to find many of our EYH alumnae and confirm our sparse anecdotal evidence that the conferences are effective in encouraging girls to pursue science and math-based careers. In partnership with the ECHO project at George Mason University, we have developed a web-based EYH Alumnae survey containing six simple questions that we wish to bring to your attention. Did you ever attend an Expanding Your Horizons in Science and Mathematics Conference as a student? If so, please complete the brief survey at the website echo.gmu.edu/surveys/contribute.php?survey=horizons to record the effect it had on you and your subsequent career path.

EYH conferences are held annually in more than 100 locales in over 30 states. A typical conference takes place on a Saturday at a local college or university and is attended by 200–500 young women from nearby middle schools and high schools. Many of these conferences conduct concurrent programs for parents and educators so they may more effectively support young women and their technical aspirations. The Math/Science Network provides local sites with technical assistance and conference and planning materials, as well as support services such as coordinated publicity and public relations materials. The Network also provides a “networking” link. An up-to-date list of this year's conferences may be found at www.expandingyourhorizons.org/conferences.html.

AWM WORKSHOP FOR WOMEN GRADUATE STUDENTS AND RECENT PH.D.'S

supported by the Air Force Office of Scientific Research, the Office of Naval Research,
and the Association for Women in Mathematics

Over the past fourteen years, the Association for Women in Mathematics has held a series of workshops for women graduate students and recent Ph.D.'s in conjunction with major mathematics meetings.

WHEN: The next AWM Workshop, to be held in conjunction with the First Joint Meeting of CAIMS and SIAM (the 24th Annual Meeting of CAIMS/SCMAI and the 2003 SIAM Annual Meeting), will take place at the Queen Elizabeth Hotel in Montreal, Quebec, Canada, June 16–20, 2003.

FORMAT: The workshop will consist of a poster session by graduate students and two or three minisymposia featuring selected recent Ph.D.'s, plus an informational minisymposium directed at starting a career. The graduate student poster sessions will include all areas of research, but each minisymposium will have a definite focus selected from the research areas of Mathematical Biology, Modeling, Control, Optimization, Scientific Computing, and PDEs and Applications. AWM will offer funding for travel and two days subsistence for the selected participants. All mathematicians (female and male) are invited to attend the program. Departments are urged to help graduate students and recent Ph.D.'s obtain supplementary institutional support to attend the workshop presentations and the associated meetings.

DISCUSSION GROUP LEADERS: We also seek volunteers to lead discussion groups and to act as mentors for workshop participants. If you are interested in volunteering, please contact the AWM office.

ELIGIBILITY: To be eligible for selection and funding, a graduate student must have begun work on her thesis problem, and a recent Ph.D. must have received her degree within approximately the last five years, whether or not she currently holds a postdoctoral or other academic or non-academic position. All non-US citizens must have a current US address. All applications should include a cover letter, a summary of research work (one or two pages), a title and abstract (75 words or less) of the proposed poster or talk, and a curriculum vitae. A supporting letter of recommendation from a faculty member or research mathematician who knows her research is required for graduate student applicants, and recommended but not required for recent Ph.D.'s. All selected and funded participants are invited and strongly encouraged to attend the full AWM two-day program. Those individuals selected will be notified by the AWM Office and will need to submit a title and abstract with name, affiliation, address, etc. by mid-February to SIAM for the meeting program; AWM will provide instructions with the notification. For some advice on the application process from some of the conference organizers see the AWM web site.

Send **five** complete copies of the application materials (including the cover letter) to:

Workshop Selection Committee
Association for Women in Mathematics
4114 Computer & Space Sciences Building
University of Maryland
College Park, Maryland 20742-2461

Phone: 301-405-7892

Email: awm@math.umd.edu URL: www.awm-math.org

APPLICATION DEADLINE: Applications must be received by **January 24, 2003**.
Applications via email or fax will not be accepted.

AWM WORKSHOP AT THE SIAM MEETING

Our most recent AWM Workshop for Graduate Students and Recent Ph.D.'s was held July 8–9, 2002 in Philadelphia. This workshop is one of two held annually to increase the exposure of women mathematicians beginning their careers by having them present talks (recent Ph.D.'s) and posters (graduate students) on their research. AWM was pleased to hold this workshop once again as part of the SIAM Annual Meeting, especially this year as SIAM celebrated its 50th Anniversary.

One component of the workshop is mentoring and giving career advice to the participants. The AWM minisymposium "Career and Opportunities and Perspectives" was a big success in this regard.

Avner Friedman opened the session with his talk on "Career Opportunities in Mathematical Biosciences." He discussed opportunities at the new NSF-funded center, the Mathematical Biosciences Institute at Ohio State University. As director of this new institute, Friedman emphasized the training for postdocs at the interface of mathematics and biology. Through visitors and postdocs at this institute, there should be an increase in the size of the research community at this interface. See the website mbi.osu.edu.

Rosemary Chang of Coastcom Inc. spoke on "Mathematician as Manager." She discussed the skills needed, such as being able to give short synopses about a variety of situations to people at different levels. She included dealing with issues of a hierarchical nature and learning to adapt to change.

Grace Cho of the Boeing Company talked on "A Career as an Industrial Mathematician." Her job features included working on a team, working on multiple projects at a time, and finding useful solutions on a deadline. Preparing for funding a job in industry with a broad spectrum of applied mathematics courses and internship experience is crucial.

Rosemary Renaut of Arizona State University gave the viewpoint of an academic mathematician. She advised students to plan ahead to get prepared for an academic job; she recommended teaching a variety of courses and using technology in the classroom. Prepare



Suzanne Lenhart, AWM President with Cathleen Morawetz
(Courant Institute of Mathematical Sciences)

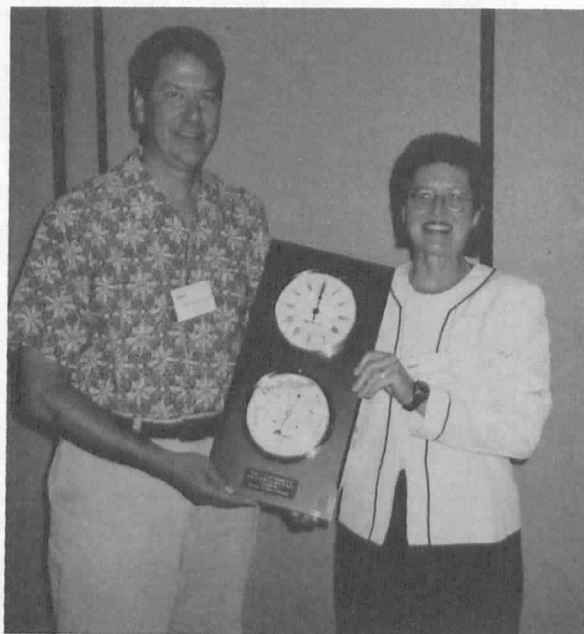
Cathleen presented a special AWM-SIAM Invited Plenary talk in honor of SIAM's 50th Anniversary. The title of her presentation was "Existence Theorems: We Need Some More in Fluid Dynamics."

for the interview by considering questions to ask and answers to expected questions and collecting information in advance about the department.

We would like to thank the Office of Naval Research and the Air Force Office of Scientific Research for their support of this workshop. We appreciate the contributions of the mentors for this workshop: Kathy Brenan (Aerospace Corporation), Rosemary Chang (Coastcom), K. Renee Fister (Murray State University), Katharine Gurski (National Institute of Standards and Technology), Mary Ann Horn (Vanderbilt University), Fern Hunt (National Institute of Standards and Technology), Barbara Keyfitz (University of Houston), Sandra Kingan, (Penn State Harrisburg), Suzanne Lenhart (University of Tennessee), Maeve McCarthy (Murray State University), Lois Curfman McInnes (Argonne National Laboratory), Joan Remski (University of Michigan), and Rosemary Renaut (Arizona State University). Thanks to Elsa Schaefer (Marymount University) for her help in organizing this workshop.

The lists of the titles and presenters for the two AWM minisymposia for recent Ph.D.'s and the graduate student poster session are given below.

Suzanne Lenhart, AWM President and Workshop Co-Organizer



Tom Manteuffel, SIAM President and
Suzanne Lenhart, AWM President

AWM presented SIAM with this clock/barometer in honor
of SIAM's Anniversary. The inscription read:

In honor of the 50th Anniversary of the Society for
Industrial and Applied Mathematics
~ ~ ~ *Association for Women in Mathematics*

AWM Minisymposium: Dynamical Systems—Partial Differential Equations and Stochastic Processes

Grazyna Badowski, University of Maryland,
College Park

“Stability of Hybrid Dynamic Systems Modulated by
Singularly Perturbed Markov Chains”

Jodi L. Mead, Boise State University

“Numerical Solution of the Shallow Water Equations in
Lagrangian Coordinates”

Kristen Moore, University of Michigan

“Pricing Equity Linked Endowments via the Principle
of Equivalent Utility”

Milena Stanislavova, University of Massachusetts,
Amherst

“Time Smoothing Techniques and Applications to the
Camassa-Holm Equation”

AWM Minisymposium: Applications of Mathematical Biology

Cammy Cole, Meredith College
“Benzene's Effect on Erythropoiesis”

Laura K. Potter, University of North Carolina,
Chapel Hill

“A Mathematical Model for the Kinetics of the Male
Reproductive Endocrine System”

Monica M. Romeo, Duke University
“Stability of Intracellular Calcium Pulses”

Rebecca Segal, CIIT Centers for Health Research
“Effect of Boundary Conditions on Particle Deposition
Predictions in Human Nasal Passages”

Graduate Student Posters Presentations:

The graduate student poster presentations took place
as part of the SIAM Poster and Dessert Reception.

Laurie Battle, University of Tennessee
“Dependence of Eigenvalues on Problem Data for
Self-Adjoint Boundary Value Problems”

Angela Cheng Mejeur, University of Tennessee
“Optimal Control of Treatment in an HIV Immunology
Model”

Vera Cherepinsky, Courant Institute of
Mathematical Sciences
“Bayesian Inference for Cluster Analysis of
Microarray Data”

Irma Cruz-Rodriguez, Florida State University
“Topology of Spiral Waves in Excitable Media”

Genetha A. Gray, Rice University
“A Variational Study of the Electrical Impedance
Tomography Problem”

Sarah E. Hewitt, University of Washington
“Dynamics of the Optical Parametric Oscillator”

Jennifer Mann, Florida State University
“Topology of Type II Topoisomerases”

Colleen C. Mitchell, Duke University
“Mathematical Properties of Time Windowing in
Neural Systems”

Baochi Nguyen, Massachusetts Institute of Technology
 "Mechanics of Yeast Growth: A Model System for
 Tissue Growth and Development"

Brandy Rapatski, University of Maryland, College Park
 "Determining the Infectiousness of HIV"

Suzanne Sindi, University of Maryland, College Park
 "Determining and Evaluating the Repeat Structure in a
 Genome"

Maria Siopsis, University of Tennessee
 "A Model for Pseudo-Nitzschia Multiseries, A Toxic
 Algae Species"

AIM: NEW INSTITUTE

The American Institute of Mathematics (AIM), a nonprofit math institute in Palo Alto, CA, has received a \$5 million grant from NSF to found the AIM Research Conference Center (ARCC), which will begin running workshops in autumn 2002. "We are extremely gratified to have been awarded this grant," said Brian Conrey, Director of AIM. "AIM collaborations have led to some nice results as the 80 papers in our preprint series demonstrate. The recent proof of the Perfect Graph Conjecture, which followed from work started with an AIM project, also shows the power of focused collaborative research."

Whereas fifty years ago mathematical collaboration was relatively rare, today approximately half of all mathematical papers are written by multiple authors. ARCC will help develop and support collaborations by holding small, focused research workshops, with entire groups of attendees working together on a specific mathematical goal. ARCC is especially concerned with facilitating collaborations which include women, underrepresented minorities, junior mathematicians, and researchers at primarily undergraduate institutions and looks for workshop proposals which can do this. Although workshop participation is limited to better encourage in-depth communication among attendees, each workshop has spots which are available through

Helen Moore, Associate Director of ARCC, American Institute of Mathematics, Research Conference Center

application only. The applications are to ensure that researchers not previously known to the organizers have a good chance at participating.

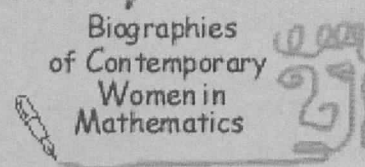
To aid in joint work after workshops, and to include the larger research community, each workshop will also have a website that is accessible by anyone. These websites will be frequently updated and will include open problems, proposed research strategies, and progress updates.

Workshops will be held at AIM in Palo Alto, CA for the first two years, but then the AIM Research Conference Center will move to Morgan Hill, forty miles south of Palo Alto. The ARCC buildings will be styled after the Alhambra in Granada, Spain, known for its mathematically intricate patterns. The new site will include a lecture hall, an extensive library, and visitor accommodations. Eventually, ARCC will hold twenty-four week-long workshops each year on a diverse range of topics. Up to 32 researchers will participate and be housed onsite during each workshop. The future ARCC site is adjacent to the largest state park in northern California, Henry W. Coe State Park, which has several hundred miles of hiking trails.

AIM itself has been around since 1994, when it was founded by Silicon Valley businesspeople John Fry and Steve Sorenson to support research mathematics. John Fry received an undergraduate degree in mathematics at Santa Clara University and was inspired by his professor and former MAA president, Gerald Alexanderson, who is Chair of the Board of Trustees of AIM. AIM has sponsored conferences, small focused research groups, public math lectures, and math activities for local high school students. Of recent note is a student in AIM's after-school problem sessions, who did well in this year's USA Math Olympiad (USAMO). Inna Zakharevich, of Gunn High School in Palo Alto, tied for first place by achieving one of only five perfect scores nationwide in the May 2002 USAMO competition. She attended the recent Math Olympiad Summer Program in Lincoln, Nebraska, and will begin her studies as a math major at Harvard University this fall.

See <http://www.aimath.org/> for pictures and more information about AIM and ARCC. ARCC is currently accepting proposals for workshops that would take place in the autumn of 2003 or later. Proposals which include the participation of women, underrepresented minorities, junior mathematicians, and researchers from primarily undergraduate institutions are especially encouraged.

Essay Contest



To increase awareness of women's ongoing contributions to the mathematical sciences, the Association for Women in Mathematics (AWM) is sponsoring an essay contest for biographies of contemporary women mathematicians and statisticians in academic, industrial, and government careers.

WHO CAN ENTER? This essay contest is open to students in the following categories: middle school, high school, undergraduate, and graduate student. At least one winning submission will be chosen from each category.

WHAT IS THE SUBJECT OF THE ESSAY? Your essay should be based primarily on an interview with a woman currently working in a career in the mathematical sciences. The submission must be in essay form, not just a transcript of your interview.

HOW LONG SHOULD THE ESSAY BE? The essay should be approximately 500 to 1000 words in length.

WHO CAN I WRITE ABOUT? 1.) You may interview and write about any woman currently working in a mathematical sciences career. 2.) You are encouraged (but not required) to seek out an interviewee that you do not already personally know. If you would like to be put in contact with someone who has agreed to be interviewed for this contest, please contact Victoria Howle (contest organizer) at vehowle@sandia.gov.

HOW WILL ESSAYS BE JUDGED? Essays will be judged by a panel of mathematicians on content, grammar, and presentation.

WHAT DO I NEED TO SUBMIT? A valid submission will contain the following: 1) A biographical essay, based primarily on an interview, of approximately 500-1000 words in length, on a woman currently working in a career in the mathematical sciences. 2) A short (approximately 100 words) biographical sketch of the student contestant. The sketch should include the student's name, grade level, school, and mathematical interests. 3) Information about the student: student's name, address of student (or parent), phone number or email address of student (or parent); information about the subject of the biography: name, phone number and/or email address. *All information should be submitted in plain text format.*

WHEN IS THE DEADLINE AND WHERE DO I SEND MY SUBMISSION? All submissions must be received by **November 1, 2002**. All submissions should be sent to Victoria E. Howle (contest organizer) in plain text format either by email to vehowle@sandia.gov or to the following address: Dr. Victoria E. Howle, Sandia National Labs, MS 9217, PO Box 969, Livermore, CA 94551. All submissions become the property of the Association for Women in Mathematics.

SEEKING VOLUNTEERS TO BE INTERVIEWED: We are currently seeking women mathematicians to volunteer as the subjects of these essays. For more information or to sign up as a volunteer, contact Victoria Howle at vehowle@sandia.gov.

EDUCATION COLUMN

One of the accomplishments of which I am most proud is the creation of a regularly meeting quasi-organization entitled WaToToM. It enables Washington's Teachers of Teachers of Mathematics to converse, collaborate and occasionally even conspire, with considerable pleasure and profit.

Apply to that a scaling factor of ten to some non-trivial power and you will arrive at a recent accomplishment of Deborah Hughes-Hallett and some colleagues in which I had the great good fortune to participate. This was the 2nd International Congress on the Teaching of Mathematics (at the undergraduate level.) It took place July 1–6 on the island of Crete, with English as the official language. Like its 1998 predecessor on the island of Samos, it was a smashing success—so much so, in fact, that an attempt to describe it in a few paragraphs is a clear demonstration of classical *hubris*. I'll do it anyway, of course, but do bear in mind that this is the perspective of one of several hundred participants, coming from one of over fifty countries.

The backbone of the program was the series of ten invited lectures, one to three of which began each day. They make a good, representative point at which to begin my description, not only because the speakers came from eight different countries but because they covered a large number of issues and enriched all discussions by providing a wide spread of points of view. The opening lecture focused on the beauty and grandeur of mathematics. Professor Terzioglu, of Sabanci University in Istanbul, Turkey, pointed out that although we live always in a world of changing views and opinion tug-of-wars:

yet below this surface is another world, the world of the infinite, where progress is always in a steady forward direction. In this world there can be no notion of "the shortness of the human life span" or even "time"; definitely no notion of material gains, for each idea is a drop that will expand within the never-ending flow that endures beyond centuries and millenniums. This may be why we mathematicians are perhaps among those people who can sense the true meaning of the word "infinite" in the most acute way.

Mathematics is a precious human achievement. It transcends boundaries of all kinds—geographical, historical, national, philosophical or linguistic. Mathematics is accumulative and ageless.... The proof attributed to Euclides is still valid today.

Later on, Professor Bourguignon, research director of the CNRS in France, elaborated on the nature of mathematics:

...one of key features to hope and generate a different attitude towards Mathematics among new generations of students, is to make it perceptible to them that there are questions which presently do not have answers. Progress on them can be of different types: either they can be considered as non interesting (a highly subjective judgment of course), and as such not worthy of further investigation, or impossible to answer (realizing that some important statements in Mathematics can be proved to be non provable was one of the major achievements in XXth century Mathematics due to Kurt Gödel), or just beyond reach of present methods and concepts.

Giving some idea that there are challenges around us, and making them perceptible, and at the same time meaningful, is a challenge in itself. Today, to my knowledge, not much thought has been put towards this goal, and this lack of investment becomes a handicap in our societies where the relation of students to schools has changed a lot because of the huge amount of information on a variety of subjects they have access to outside the school system.

If we are to have a chance of convincing a large portion of the school population that Mathematics is a living science, the minimum we must achieve is to prove it has a future. We cannot take this for granted, and we have to design tools to do that.¹

After a series of extremely cogent remarks (intended as seeds for debate) on the state of the teaching of mathematics, Bourguignon concluded with a challenge:

A political figure of the first half of last century in France, Edouard Herriot, is remembered for having said "La culture, c'est ce qui reste quand on a tout oublié" [*Culture is what is left when everything has been forgotten*]. I have the feeling that

by Column Editor Ginger Warfield, Department of Mathematics, University of Washington, Seattle, WA 98195;
warfield@math.washington.edu

mathematicians have too often forgotten that building a mathematical culture is a responsibility that has been entrusted with them. It is indeed much broader than just training the new generation of people who are going to replace us as specialists. I am afraid that, at this moment, we, as a community, have not put enough thinking to our broad responsibilities.

Other speakers chose to address more specific aspects of mathematics education, from the importance and value of visualization to the application of the Dutch Realistic Mathematics Education in a differential equations course in Korea. The last speaker was Alan Schoenfeld who, true to form, sent us all out charged up. This he did by starting with a thumbnail sketch of the contents of his paper on *Making Mathematics Work for all Children: Issues of Standards, Testing and Equity* (summarized in this column in the January–February 2002 issue) and tying it in with various of the week’s previous talks to show how universally and internationally mathematics is key to issues of social equity. He then described a new project with which he is involved. If all goes well, the project will provide a bunch of potentially marginalized middle school kids with a major mathematical boost, their teachers with a useful learning experience, the teaching community at large with a valuable model, and researchers with significant information. If all goes well, he said -- and what does that mean? What does it entail? How do you arrange it? How do you even recognize it for sure? “Tune in again in another four years,” he said, “and I might be able to tell you something!”

The talks, as I said, were the backbone of the Congress. At the first supporting level were three panel discussions. Since these tended to occur right after a rather heavy lunch, I can’t give you many details, but the topics were indeed interesting: “On the Role of the History of Mathematics in Mathematics Education,” “Mathematics is for All,” and “Teaching undergraduate mathematics, based on the corresponding ICMI study.”

The next level of support occurred on the lower level of the conference center, where the rooms had titles like Athena, Artemis and Minos, rather than the upper level with the powerhouses: Zeus and Secretariat. These were the Parallel Sessions, two sets of twenty-minute sessions per day, eleven at a time. They spanned the width of the conference themes: Educational Research, Technology, Innovative Teaching Methods, Curricular Innovations,

Preparation of Teachers, Mathematics and Other Disciplines, and Distance Learning. Predictably enough, some provoked a “Wow!” and some an “Eh???” Even the latter often spurred interesting conversations, though, as did the poster sessions (especially, for me, some nifty Australian mathematical fiber art).

And with those interesting conversations we get to the heart of the whole experience – and here is one spot where I know my perspective is a shared one. There is nothing equivalent to spending a week with a collection of people who have come from all over the world because of a shared interest in the issues about which one feels most passionately. Nothing stirs up ideas as much as bouncing them around with folks who are coming at them from such a variety of angles. Nothing solidifies convictions like finding them shared.

Beyond that is something I treasure so much that I shall risk banality by trying to express it: the sense of being part of a huge, global community. I made some new acquaintances and friendships and deepened some old friendships, with people from Israel and Italy and South Africa and France and the United States. To some of them I have, I hope, something to offer, and from all of them I have a lot to learn. And more to the point, any of us knows that if some need comes up, any of the rest of us stands ready to try to meet it. What more can a Congress create?

Note

1. All quotations come from the CD-ROM of the Proceedings of the Congress.

ICM NEWS

We are pleased to report that on August 18th, the following resolution proposed by the US Delegation to the General Assembly of the International Mathematical Union (IMU) was passed unanimously.

The General Assembly recommends continuing the tradition of the 1994, 1998, 2002 ICMs by holding an Emmy Noether lecture at the next two ICMs (International Congress of Mathematicians) (2006 and 2010) with selection of the speakers to be made by an IMU appointed committee.

Also, the General Assembly elected Ragni Piene from Norway as one of the five members of the Executive Council of the IMU. She is the first woman to be elected to the EC.

Thanks to Don Saari and Ruth Williams for their help in the passage and preparation of the resolution.

SCIENCE FOR THE MISSES

One of the conclusions reached by James B. Conant in his recent report on American high schools is that academically talented girls are not receiving satisfactory guidance. Studying in detail a group of 22 better-than-average high schools, Conant found that in most of the schools a majority of the academically talented boys are taking at least seven years of science and mathematics during four high-school years, while in none of the schools are a majority of the more able girls taking seven years of science and mathematics. From some viewpoints the guidance at present offered able girls in the schools should be changed, but from the viewpoint of women now seeking full, constructive lives as scientists, engineers, or mathematicians, the present guidance makes sense.

To discourage girls from going into science may be realistic because, as observers note, women are discriminated against in this field. They have less chance than men of being employed at their full potential, and they are employed at lower salaries. The attitude in the schools reflects the attitude in the adult world. Only boys and men may profitably study mechanical things and scientific ideas; girls and women will find them too difficult. Or, to put the general consensus even more briefly, men are better than women.

Whatever the present attitudes, the battle of the sexes is not yet over. Improvement in opportunities for girls who become scientists, engineers, or mathematicians may occur, perforce, because of increases in the demand for specialized talent. There is every expectation that

Reprinted with permission from "Science for the Misses," Science 129, 749 (1959). Copyright 1959 American Association for the Advancement of Science. The editorial is signed J.T., for Assistant Editor Joseph Turner. Thanks to Jean Taylor for bringing this article to our attention.

excellence in science will play an increasingly important role in the contest between East and West as well as in our expanding civilian economy. As to how this country now stands in relation to the Soviet Union, a number of observers have compared unfavorably our present use of able women with theirs, particularly in engineering and medicine.

To seek a change in those attitudes that put a limit on the achievements of women over and above the limit set by abilities is not to forget that girls become women and women get married and raise children. The employment of women does raise problems not raised by the employment of men. More liberal personnel policies may be necessary, especially as they bear on leaves of absence, part-time schedules, and travel requirements. But if life becomes a little less convenient for the employer, in a field like that of research it can still be readily managed.

On the question of men, women, and careers, we must confess that we have our prejudices, too. We like to see talent encouraged whether it is possessed by a boy or a girl, and whether the talent is in science or in some other field of endeavor. That the employment of more women is part of the answer to growing demands for technological manpower seems to us clearly proved, but we see a manpower shortage less as a reason for employing women in science than as a good argument for putting able women where they should be in any case. Increases in demand for specialized talent may be just the thing to stop the cycle in which the lack of education of able women means poor opportunities, and poor opportunities mean less motivation to seek more education.

TONDEUR RETIRES

The overriding sense I want to express today is my sense of gratitude. First and foremost gratitude for the support by Rita Colwell and Robert Eisenstein. At no time was there more enthusiastic support in the Federal Government for the Mathematical Sciences than displayed by the current NSF leadership, as well as the

Remarks by Philippe Tondeur at his Retirement Reception, held May 15, 2002 at the NAS Building in Washington, DC

officers in the Office of Management and Budget. I also want to include in my thanks Adriaan DeGraaf and the MPS staff. I want to take this occasion to thank my predecessor, Donald Lewis, who prepared the groundwork for the current situation. During his tenure, General William Odom, former head of the National Security Agency, chaired an outstanding International Assessment Effort of the Mathematical Sciences, which amounted to compelling marching orders for my task. Bill Odom has continued to be a steady supporter of the Mathematical Sciences throughout these years at NSF. Thank you all.

This support of the mathematical sciences became reality because of our increased attention to the multiple environments in which we act: within our discipline; as enablers of science and engineering; and as supporters of the next generation.

It has been said by one of our street philosophers: luck is what happens when preparation meets opportunity. I am indeed a lucky person, and grateful for the opportunity to serve.

I feel deep gratitude for an incredibly dedicated staff at the Division of the Mathematical Sciences, starting with Bernie McDonald and Tidy Henson, and extending throughout the Program Directors and support staff. They have a large part in the progress the Division has made during the past few years. They also provided me with a splendid education about the many facets of this amazing organization. I would be remiss if I did not acknowledge the outstandingly competent help the professional societies provide for our work at NSF. These are the American Mathematical Society, the Society for Industrial and Applied Mathematics, the American Statistical Association, and the Mathematical Association of America. As one concrete example, I have no doubt that our staff of 21 Program Directors is the group of the world's most intense users of MathSciNet, which owes so much to the outstanding executive leadership of John Ewing at the AMS.

I wish to express my gratitude and admiration to the many people throughout the National Science Foundation, who exercise their public service with such a remarkable sense of purpose. Even as severe a critic as the OMB judged this agency to be one of the best run in the federal government. Rita and all NSFers, you make us proud to serve.

I owe much more to NSF. Here is a relevant piece of my life story. I got a Ph.D. at the University of Zürich,

quite a while ago, and started roaming the world as a postdoctoral fellow—the roaming being an adolescent's dream—and a scientific career the unexpected realization of that dream. One day I got a letter from a US educational establishment inviting me to spend a year as its guest. I walked into a US Consulate and asked for a visa to this country. The Consul looked at my letter, smiled, and gave me the visa I asked for on the spot. How does one explain this miracle? The secret may be that the Consul was wearing the tie of the establishment inviting me, a Harvard tie. This is how I came to the US; the visa became a green card, then a certificate of citizenship. My heart is overflowing with gratitude for all the opportunities this generous country offered to a young man from a far away land.

I found out much later that my Harvard salary was actually paid by NSF through a PI grant to Raoul Bott, and the Program Director was Ralph Krause. Thank you both, Raoul and Ralph.

And the accent is still there, after all these years, as my freshmen at Illinois invariably pointed out with no small amount of disapproval.

Three years later I was on a regular faculty position, towards the end of the academic year, and my colleagues said: if you want to be paid in the summer, you have to get a grant. And how do you do that? the ignorant young man asked. You write to NSF, explain your research, and the deadline is tomorrow. I did write that day, and a few weeks later I got my first PI grant allowing me to indulge in geometry and topology to my heart's content. I have to report that grant approvals take a bit longer today. This research was my life's focus for many happy years—36 years in fact.

Six years ago I was invited to chair my department at the U of Illinois. This brought a substantial change of professional perspective, from single-minded research absorption to a public service function. With this change in perspective, I found it impossible not to respond to the invitation to come to NSF three years ago, and to contribute to this agency, which had been such an essential part of my life, which has done so much for the US sciences, and which is destined to do much more for the sciences world-wide. Here my thanks go to Margaret Wright, for the role she played in that decision, and to Bob Eisenstein, who appointed me.

I also wish to express my deep gratitude to Claire, my cherished life-long companion, who willingly shared in this as so many other complicated and exhilarating

adventures throughout our happy life together.

I am grateful to have been able to repay in some small measure the wonderful things NSF did for my generation. I leave the place with the conviction that my successor will be able to build on the work begun by his predecessors and take another big step in the progress of the Mathematical Sciences, the ultimate enabler of science and engineering. I have the deep conviction that the progress of the Mathematical Sciences in this century will exceed by far what has been achieved in the past twenty-five hundred years, and that this will contribute mightily to the Science and Engineering enterprise of this country and the world. And I expect that this country of unprecedented opportunity will continue to be a beacon to the world in large measure because of its faith in science and the opportunities it offers to pursue science.

Thank you.

Note from *Emissary*, the Mathematical Sciences Research Institute newsletter: Philippe Tondeur headed the NSF's Mathematics Division from 1999 to 2002 and oversaw an increase in the Division's budget from \$106 million in FY 2000 to (probably) \$182 million in FY 2003.

AWARDS AND HONORS

CONGRATULATIONS to all those listed below for their meritorious achievements!

In April 2002, JOAN FEIGENBAUM (Yale University), an AWM Executive Committee Member-at-Large, became a Fellow of the Association for Computing Machinery (ACM), the main professional society in computer science. Her citation read: "For foundational and highly influential contributions to cryptographic complexity theory, authorization and trust management, massive-data-stream computation, and algorithmic mechanism design."

LLOYD DOUGLAS received the NSF Director's Diversity/Equal Opportunity Achievement Award, the highest award presented by the Director, Rita Colwell, in recognition of his continuous commitment and contributions to students, postdocs, NSF staff and diversity through his

outreach activities, and for his services as spokesperson for the Foundation.

Douglas has been a frequent participant in AWM activities; we also appreciate his efforts.

HENRY WARCHALL received the NSF Director's Award for Excellence in Management in recognition of his dedicated and versatile efforts managing the Mathematical Science's Focused Research Group portfolio and Vertical Integration of Research and Education in the Mathematical Sciences (VIGRE) portfolio.

FRANCES KIRWAN, University of Oxford, was elected a fellow of the Royal Society of London for 2001.

The Householder Award XI (2002) for the best dissertation in numerical linear algebra for the period 1999–2001 has been awarded to JING-REBECCA LI, now at the Courant Institute, for her dissertation "Model reduction of large linear systems via low rank grammians." She received her Ph.D. at MIT under the direction of Jacob White. The award was presented at a banquet during the Householder Symposium XV in Peebles, Scotland, June 16–21, 2002. For a photo of Li with the 2002 Householder Prize Committee, see www.ma.man.ac.uk/~higham/photos/house02/020619-2235-40.htm. Her current research interests include Iterative Lyapunov Equation Solvers, Model Reduction, and Multipole-Grid Projections for Capacitance Extraction.

Li's talents were recognized early on by AWM; she was the Schafer Prize winner in 1994 as a junior at the University of Michigan. Also, she presented a poster at the Olga Taussky Todd Celebration of Careers for Women in Mathematics in 1999 while a graduate student at MIT.

She held an NSF Graduate Fellowship, 1995–1997, and received a Semiconductor Research Corporation Graduate Fellowship, Hewlett-Packard Research Fellow, 1999–2000.

A Rhodes Scholarship has been awarded to LILLIAN B. PIERCE of Fallbrook, CA, a senior mathematics major at Princeton University. A Goldwater Scholar ranked first in her class each year at Princeton, she has won many awards for academic excellence. She is co-concertmaster and co-president of the Princeton orchestra and founder and first violinist of the Nassau String

Quartet, and she has given concert tours in Europe. Pierce was home schooled until the age of sixteen. She will do graduate research in mathematics at Oxford.

MARIE-LOUISE MICHELSON, 60, a mathematics professor at SUNY at Stony Brook, broke her own masters world indoor record for the 60–64 age group when she ran the 1500 meters in 5:42.57. Michelson also set her age group's world mark in the 3000, finishing in 12:06.88. [*Sports Illustrated*, February 4, 2003, p. 37. Thanks to an alert reader for forwarding a copy to us!]

WORK AND FAMILY LIFE

The Institute for Work & Employment Research (IWER) has an interesting website at mitsloan.mit.edu/iwer. At the top we see a message from IWER Co-Director Tom Kochan which begins: "Many of us who share a commitment to updating the policies and institutions governing work and employment continue to be frustrated by the lack of attention to these issues."

IWER, with grants from the Ford and Rockefeller foundations, has organized a Task Force on Reconstructing American's Labor Market Institutions. It is a group of researchers, corporate and labor representatives, leaders of community organizations, and policy makers who recognize the need to update our labor market institutions and policies, but bring diverse perspectives to the discussion of how to do so. The Task Force will pull together research results, study innovative approaches and experiments aimed at particular problems and issues, disseminate the results of its analysis and dialogue, and seek to stimulate further innovation and debate over how to create a better match between the needs of the workforce and the economy and our labor market institutions.

The Sloan Work-Family Advisory Network makes its web home at www.sloan.org/programs/stdndrd_dual_career.shtml (for other programs supported by the Sloan Foundation, see www.sloan.org/main.shtml). In September 2001, the report *Integrating Work and Family Life: A Holistic Approach*, a project of this Network written by Lotte Bailyn, T. Wilson Professor of Management, MIT; Robert Drago, Professor of Labor Studies, Penn State,

and Thomas A. Kochan, George M. Bunker Professor of Management, MIT, was released. The report recognizes the effect of work-family pressures on society and explores the problems of financial stresses, increasing time squeeze, low wage ceilings for paid care providers, under use of family friendly policies and work structures that do not fit today's reality.

The Center for Work and Family Research at Penn State University (www.ssri.psu.edu/cwfr/) has as its mission the promotion of "excellence in research and education on issues at the intersections of work, family, and community."

One of its projects, the Mapping Project, is especially relevant to academics. Research on the work/family circumstances of faculty at US institutions of higher education suggests that faculty status tends to be incompatible with family commitments, particularly for women. Building upon the earlier Faculty & Families Project, the Mapping Project seeks to identify the barriers to family commitments, and how these vary according to gender, type of institution, geographic location, discipline, tenure structures, and potential social support. By identifying the sources of these barriers, they hope to locate methods and mechanisms to remove the barriers and provide faculty with greater opportunities to make and meet commitments to both work and family.

The preliminary results of the national survey of faculty (lsir.la.psu.edu/workfam/prelimresults.htm) make interesting reading. (Thanks to Catherine Roberts for sending this web address to us; starting here led into a fascinating websurfing session, including visits to the sites mentioned above.) The summary of the preliminary results follows:

- Bias avoidance behaviors are more common among female as opposed to male faculty. The women who responded were raising fewer children and reported lower levels of organizational and supervisor support for dual commitments to work and family. These differences appeared in the overall sample, across female and male faculty within each of the simplified Carnegie classification categories employed here, across the disciplines of Chemistry and English, and separately for tenured/tenure-track and non-tenured/non-tenure-track faculty.
- Although the evidence is somewhat mixed, it does not appear that research institutions are less conducive to family formation relative to teaching

institutions.

- Rates of family formation were, for men and separately for women, consistently higher in the male-dominated discipline of Chemistry, as opposed to the female-dominated discipline of English.
- Reported rates of family formation were higher for women, and separately for men, who held tenured or tenure-track positions relative to those on fixed contracts. Non-tenure line positions are not currently being used by most occupants as a way to generate time for their families.

The American Association of University Professors (AAUP) has recently published a guidebook, *The Family and Medical Leave Act: Questions and Answers for Faculty*. The FMLA entitles many faculty up to twelve weeks of job-protected unpaid leave each year to take care of a serious health condition or a family obligation such as the birth of a child; the arrival of an adoptive or foster child; or the serious health condition of a spouse, child, or parent. For ordering information, see www.aaup.org/catalogue/02FLMA.htm.

In May 2001, the Association's Committee on the Status of Women in the Academic Profession and its Subcommittee on Academic Work and Family approved a Statement of Principles on Family Responsibilities and Academic Work. In November 2001 the AAUP Council adopted the statement as Association Policy. The complete text may be found at www.aaup.org/statements/re01fam.htm.

The statement gives a number of policies and guidelines for developing institutional policies that "enable the healthy integration of work responsibilities with family life in academe.... The policies fall into two categories: (1) general policies addressing family responsibilities, including family-care leaves and institutional support for child and elder care; and (2) more specific policies, such as stopping the tenure clock, that specifically relate to pretenure faculty members who are primary or coequal caregivers for newborn or newly adopted children, responding to the special and age-related difficulty of becoming a parent during the pre-tenure years."

The conclusion of the statement reads as follows:

Because institutional policies may be easier to change than institutional cultures, colleges and universities should monitor the actual use of their

policies over time to guarantee that every faculty member—regardless of gender—has a genuine opportunity to benefit from policies encouraging the integration of work and family responsibilities. The goal of every institution should be to create an academic community in which all members are treated equitably, families are supported, and family-care concerns are regarded as legitimate and important.

A more responsive climate for integrating work and family responsibilities is essential for women professors to participate on an equal basis with their male colleagues in higher education. Recognizing the need for broader and more inclusive policies represents a historic moment of change. The Association encourages both women and men to take advantage of legal and institutional change so that all faculty members may participate more fully in the care of their children, and may provide the necessary care for parents and other family members.

The endnotes to the statement include information on policies that are already in place at a number of institutions across the country. For example, one reads: "The University Park campus of Pennsylvania State University and the town of State College ... coordinate their spring breaks to enable faculty parents to care for their children during the break."

UNDERGRADUATE MATH PROGRAM SURVEY

The most recent comprehensive survey of undergraduate mathematics and statistics programs in the US by the Conference Board of the Mathematical Sciences (CBMS) has just been released. The report indicates that despite rising overall college enrollments during the 1990s, enrollment levels in mathematics and statistics in 2000 at both two-year and four-year institutions were substantially the same as those reported in the 1990 survey. The mathematics enrollment figures represent an increase of almost 10% from 1995 levels for four-year colleges and universities, and a decrease of 8% from 1995 levels for two-year colleges.

Survey findings from CBMS 2000 concerning four-year college and university undergraduate mathematics and statistics programs include:

- Since 1995 the number of mathematics bachelors degrees dropped by about 14%;
- There has been a 35% increase in part-time faculty since 1990;
- Statistics course enrollments rose 45% over the past 10 years.

The report also contains extensive data about mathematics programs at two-year colleges, including:

- There was a 600% increase in temporary full-time faculty and an 8% drop in full-time permanent faculty since 1995;
- For the first time, the number of women full-time permanent faculty equals the number of men;
- Classes offered at local high schools, taught by selected high school faculty and providing students with simultaneous high school and college credits, accounted for 14% of algebra, precalculus and calculus sections.

The complete survey report, *Statistical Abstract of Undergraduate Programs in the Mathematical Sciences in the United States*, is available online at www.ams.org/cbms.

The report comes out at a time when both the scientific community and the general public are becoming more aware that mathematics is the foundation for the other sciences. Mathematical and statistical skills are critical in computer science, physics, engineering, and increasingly in biology and medicine (for instance, in the Human Genome Project), with additional applications ranging from national security to meteorology.

With the support of the National Science Foundation, CBMS has surveyed two- and four-year college and university mathematics programs every five years since 1965. It is the only national survey of two-year college mathematics programs. The report includes cumulative data on enrollments, majors, curriculum, and faculty and is circulated to mathematics and statistics departments, college and university administrations, and to the NSF and other government agencies as a resource to aid in allocating resources and planning effective programs.

OPPORTUNITIES

Project NExT/Young Mathematicians Network Poster Session

Project NExT and the Young Mathematician's Network invite submissions of abstracts for a poster session to be held 2:00–4:00, Thursday, January 16, 2003 at the Joint Mathematics Meetings in Baltimore. The poster size will be 48" by 36"; posters and materials for posting pages on the posters will be provided onsite. We expect to accept thirty posters. Should you require a computer hook-up, please let us know and we will check to see if this is possible.

Our poster sessions the past six years have been great successes. Visitors were numerous and included prospective employers. This session provides an excellent way to showcase one's work in a relaxed, informal environment.

If you are interested in participating, submit copies of your abstract to: Kevin Charlwood, Department of Mathematics & Statistics, Morgan Hall, Washburn University, Topeka, KS 66621; phone: 785-231-1010, ext. 1499; fax (labeled clearly for Kevin Charlwood): 785-231-1089; email: zzcharlw@washburn.edu and Ken Ross, Department of Mathematics, University of Oregon, Eugene, OR 97403-1222; phone: 541-346-4721; fax (labeled clearly for Ken Ross): 541-346-0987; email: ross@math.uoregon.edu.

The deadline for final consideration is **December 13, 2002**. Preference will be given to those who did not earn a Ph.D. prior to 1997; please include with your submission when and where you received your Ph.D., or indicate when you expect to receive it. Submit your abstract via email, not as an attachment. If it includes mathematical formulas, submit it in basic LaTeX or TeX format. Submissions will be acknowledged quickly by email. Accepted abstracts will be posted at www.youngmath.org before the Joint Meetings.

AAUW Selected Professions Fellowships

Women graduate students in designated fields traditionally underrepresented by women can receive one-year fellowships from the American Association of University Women (AAUW) Educational Foundation. Fellowships for the final year of full-time graduate study

are available in these degree programs: Architecture (M.Arch., M.S.), Computer/Information Sciences (M.S.), Mathematics/Statistics (M.S.), and Engineering (M.E., M.S., Ph.D.). Women in engineering master's programs are eligible for the first year as well.

Additional fellowships for the final year of study in the following fields are available to women of color only: Business Administration (M.B.A., E.M.B.A.), Law (J.D.), and Medicine (M.D., D.O.). Medical students are also eligible for funding in their third year of study.

Master's and first professional awards range from \$5,000 to \$12,000. The application postmark deadline is **January 10, 2003** for the fellowship year July 1, 2003 through June 30, 2004. Engineering dissertation awards are for \$20,000. The application postmark deadline is **November 15, 2002** for the same fellowship year.

For applications: write AAUW Educational Foundation, c/o Customer Service Center, Dept. 143, 2201 N. Dodge St., Iowa City, IA 52243-4030; phone: 319-337-1716, ext. 143; or visit www.aauw.org/3000/fdnfelgra/selectprof.html.

China-U.S. Conference On Women's Issues

The Third China-U.S. Conference on Women's Issues will convene October 21–24, 2002 in Beijing, PRC. This four-day event will build on the partnerships developed over the past twelve years since our first joint conference with the All China Women's Federation in 1990. This Conference will address issues of mutual concern for both U.S. and Chinese women. The purpose

of the Conference is for Chinese and U.S. participants to exchange ideas, best practices, technologies, and research that will develop relationships and build partnerships to further communication, understanding, and further move forward the activities addressing the issues. Topics include Economic Equity; Women and Violence; Protecting the Environment; and Aging, Longevity, and Active Retirement. The Honorable Patricia Schroeder will keynote the Opening Ceremony in the Great Hall of the People.

The Conference is designed as an interactive symposium and will include keynote addresses, paired presentations with Chinese counterparts, panel discussions, poster sessions, demonstrations, interactive dialogues. All participants will be involved as discussants on issues matching their interest and expertise. One day of the Conference is designated for site visits to women owned/operated businesses, women's activity centers, health facilities, and community projects focusing on conference topics. Persons registering are required to attend the full four-day program.

A special Pre-Conference Business Forum is scheduled with the Shanghai Women's Federation, October 17–20. The Forum will provide opportunities for U.S. participants to meet and exchange information with Shanghai business women and entrepreneurs, as well as to visit women owned and operated companies there.

The Conference organizers are Global Interactions, Inc., Phoenix, AZ, and the All China Women's Federation. See www.globalinteractions.org for further information.

CALL FOR NOMINATIONS: THE 2004 NOETHER LECTURE

The Association for Women in Mathematics established the Emmy Noether Lectures to honor women who have made fundamental and sustained contributions to the mathematical sciences. This one-hour expository lecture is presented at the Joint Mathematics Meetings each January. Emmy Noether was one of the great mathematicians of her time, someone who worked and struggled for what she loved and believed in. Her life and work remain a tremendous inspiration.

The mathematicians who have given the Noether lectures in the past are: Jessie MacWilliams, Olga Taussky Todd, Julia Robinson, Cathleen Morawetz, Mary Ellen Rudin, Jane Cronin Scanlon, Yvonne Choquet-Bruhat, Joan Birman, Karen Uhlenbeck, Mary Wheeler, Bhama Srinivasan, Alexandra Bellow, Nancy Kopell, Linda Keen, Lesley Sibner, Olga Ladyzhenskaya, Judith Sally, Olga Oleinik, Linda Rothschild, Dusa McDuff, Krystyna Kuperberg, Margaret Wright, Sun-Yung Alice Chang, and Lenore Blum.

The letter of nomination should include a one-page outline of the nominee's contribution to mathematics, giving four of her most important papers and other relevant information. *Five* copies of nominations should be sent by **October 15, 2002** to: The Noether Lecture Committee, Association for Women in Mathematics, 4114 Computer & Space Sciences Building, University of Maryland, College Park, MD 20742-2461; phone: 301-405-7892; email: awm@math.umd.edu.

AWM WORKSHOP, JULY 2002



AWM Workshop: Minisymposium on Career Opportunities and Perspectives at SIAM Meeting

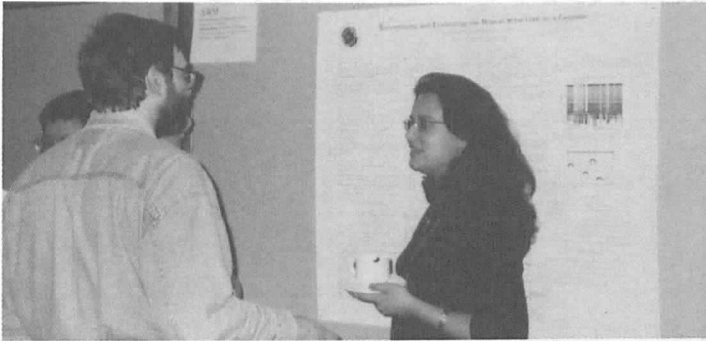
Avner Friedman, Ohio State University



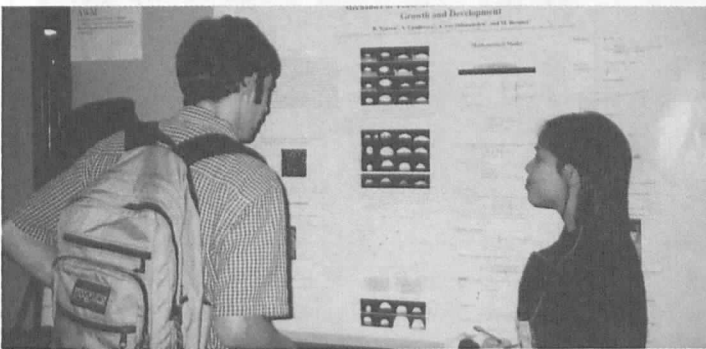
(L to R): Rosemary Chang, Coastcom; Rosemary A. Renaut, Arizona State University; Grace E. Cho, The Boeing Company



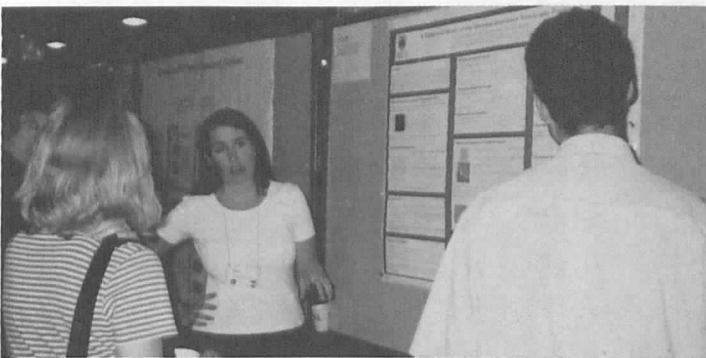
AWM Minisymposium Dynamical Systems - Partial Differential Equations and Stochastic Processes: *(L to R):* Kristen Moore, University of Michigan; Jodi L. Mead, Boise State University; Milena Stanislavova, University of Massachusetts, Amherst and Grazyna Badowski, University of Maryland, College Park



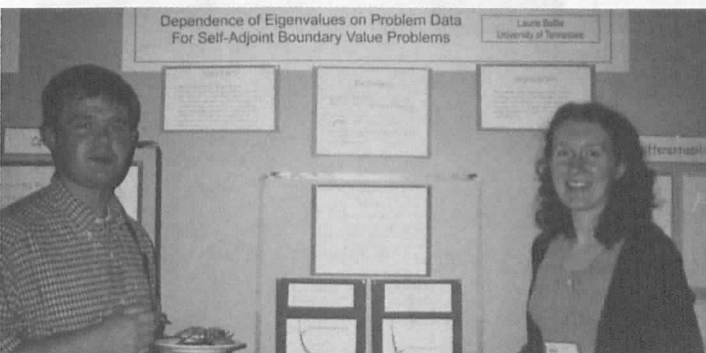
Suzanne Sindi, University of Maryland, College Park (*on right*) explaining her poster entitled "*Determining and Evaluating the Repeat Structure in a Genome*"



Baochi Nguyen, Massachusetts Institute of Technology (*on right*) explaining her poster entitled "*Mechanics of yeast growth: a model system for tissue growth and development*"



Genetha A. Gray, Rice University explaining her poster entitled "*A Variational Study of the Electrical Impedance Tomography Problem*"

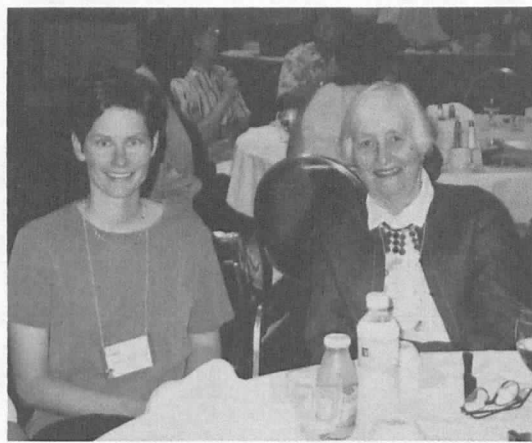


Joel Mejeur, University of Tennessee and Laurie Battle, University of Tennessee in front of Laurie's poster entitled "*Dependence of Eigenvalues on Problem Data for Self-Adjoint Boundary Value Problems*"

AWM WORKSHOP, JULY 2002



(Sitting, L to R): Elsa Schaefer, Marymount University (Workshop co-organizer), Baochi Nguyen, M.I.T.
(Standing, L to R): Renee Fister, Murray State University and Maeve McCarthy, Murray State University



(L to R): Joan Remski, University of Michigan and Cathleen Morawetz, Courant Institute of Mathematical Sciences.



(L to R): Monica M. Romeo, Duke University and Andrea Bertozzi, Duke University



(Sitting, L to R): Colleen C. Mitchell, Duke University, Christina Weaver, SUNY at Stony Brook,
(Standing, L to R): Rosemary Chang, Coastcom and Irma Cruz-Rodriguez, Florida State University



(Sitting, Front Row): Fern Hunt, Natl. Institute of Standards and Tech., Joan Hutchinson, Macalester College, Kris Stewart, San Diego State University. *(Standing/Backrow):* Cammey Cole, Meredith College, Maria Siopsis, University of Tennessee, Barbara Keyfitz, University of Houston, Kristen Moore, University of Michigan.



(L to R): Sarah E. Hewitt, University of Washington, Suzanne Lenhart, University of Tennessee (AWM President) and Angela Cheng Mejeur, University of Tennessee



(L to R): Mary Ann Horn, Vanderbilt University, Lois Curfman McInnes, Argonne National Laboratory, and Jodi L. Mead, Boise State University



(L to R): Sandra Kingan, Penn State University Harrisburg, Peg Howland, University of Minnesota, Vera Cherepinsky, Courant Institute of Mathematical Sciences

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**Lappan-Phillips-Fitzgerald Chair in Mathematics Education
Department of Mathematics, Michigan State University**

The Department of Mathematics at Michigan State University is seeking a distinguished scholar to become the Lappan-Phillips-Fitzgerald Professor of Mathematics Education. This position includes an academic appointment in the Department at the level of full professor, a nationally competitive salary, and a fund for research expenses. The newly established Lappan-Phillips-Fitzgerald Chair in Mathematics Education is endowed by the Michigan State University Mathematics Education Endowment Fund established by the University and the Connected Mathematics Project.

We seek a senior mathematics educator whose scholarship has significantly benefited K-12 mathematics education through curriculum, teaching, student learning, teacher education, teacher professional development or policy. Candidates should have an outstanding record of research, and/or development productivity that is based in and generates research, and a strong background in mathematics. We seek a scholar whose achievements and professional interests are compatible with the land-grant mission of Michigan State University.

The Lappan-Phillips-Fitzgerald Chair will be expected to engage the broad talents of MSU's mathematics education, mathematics, and education faculty; graduate and undergraduate students; and K-12 teachers in efforts to improve mathematics teaching and learning. The applicant must contribute to advancing the research profile and national reputation of the mathematics education endeavors at Michigan State University. This will involve providing intellectual leadership in the Department of Mathematics, the College of Natural Science, and the College of Education, and with faculty from other institutions, to create and sustain research opportunities. We seek a scholar who also has a record of working effectively as a mentor for junior faculty members and doctoral students, and who is a dedicated teacher with a commitment to teaching as an essential component of scholarship.

Inquiries and nominations, including self-nominations, should be sent to Jean Beland, Assistant to Dr. Joan Ferrini-Mundy, MSU, College of Natural Science, 211 N. Kedzie Lab, East Lansing, MI 48824-1031, (lpfchair@msu.edu). Please include the candidate's vita with the letter of nomination. Review of nominations will begin September 1, 2002. The intention is to appoint a person to assume the Chair in the summer or fall of 2003. Women, minorities, and persons with disabilities are especially encouraged to apply.

MSU is an affirmative-action, equal opportunity employer.

-more-

ARCC

American Institute of Mathematics Research Conference Center

The new AIM Research Conference Center (ARCC) will host week-long focused workshops in all areas of the mathematical sciences. ARCC focused workshops will be distinguished by their emphasis on a specific mathematical goal, such as progress on a significant unsolved problem, understanding the proof of an important new result, or the examination of the convergence of two distinct areas of mathematics.

Call for Proposals

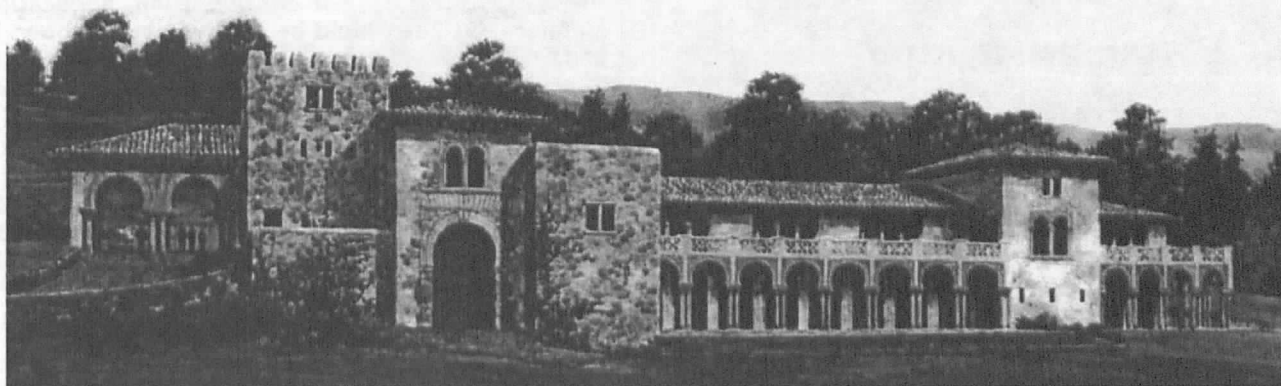
Proposals are sought for workshops beginning late summer, 2003.

Proposals require:

- a list of organizers
- a description of the workshop goals
- an outline of how these goals will be met

Workshops will be held at AIM in Palo Alto, California. More details, and an on-line application, are available at <http://www.aimath.org/ARCC>

ARCC seeks to promote diversity in the mathematical community. We encourage applications which include the participation of women, underrepresented minorities, junior mathematicians, and researchers from primarily undergraduate institutions.



The future home of ARCC in Morgan Hill, California

Major funding for ARCC is provided by a grant from the National Science Foundation.

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UNIVERSITY of NEW HAMPSHIRE

**CHAIR, DEPARTMENT OF
MATHEMATICS AND STATISTICS**

We invite applications for the tenure-track faculty position of Chair in the Department of Mathematics and Statistics. The anticipated starting date is August 2003. Preference will be given to candidates whose interests are aligned with existing strengths within the department's programs. The department is diverse with expertise in statistics and mathematics education, as well as in pure and applied mathematics.

The Chair is expected to provide strong leadership and vision for the department. Candidates are expected to demonstrate excellence in research and teaching, and to possess strong administrative skills. Candidates should provide qualifications for an appointment to full professor. Formal review of applications will begin on December 1, 2002. All applications will be considered until the position is filled.

Please submit applications to:

**Chair Search Committee
Department of Mathematics and Statistics
University of New Hampshire
Durham, NH 03824**

An application should include a cover letter with a statement of relevant experiences for this position, a curriculum vitae, and contact information for four letters of recommendation. (We will request letters for those applicants on our short list.) If you have any questions please address them to Professor Karen Graham at kjgraham@cisunix.unh.edu or (603) 862-2320.

UNH is committed to excellence through diversity of its faculty and strongly encourages women and minorities to apply.


MSRI

The Mathematical Sciences Research Institute in Berkeley, California, solicits applications for membership in its 2003-04 programs:

DIFFERENTIAL GEOMETRY (year-long)

DISCRETE AND COMPUTATIONAL GEOMETRY
(Fall 2003)

**TOPOLOGICAL ASPECTS OF REAL ALGEBRAIC
GEOMETRY** (Spring 2004)

Apply online for Research Professorships,
Postdoctoral Fellowships, or
General Memberships.

www.msri.org


**DEAN
COLLEGE OF MATHEMATICAL
AND PHYSICAL SCIENCES**

The Ohio State University invites nominations and applications for the position of Dean of the College of Mathematical and Physical Sciences. The Dean will have a solid base on which to build increased national and international standing and, as the College's Chief Executive Officer, will report directly to the Executive Vice President and Provost of the University.

The University has implemented an Academic Plan to enhance academic excellence and to raise the standards of colleges, departments, centers, and institutes. The University is strongly committed to diversity, a cornerstone of the Academic Plan, and seeks an individual with a strong commitment to success in this area.

Qualifications for the position include a distinguished record in research and teaching plus demonstrated leadership and administrative ability. Candidates must qualify for a tenured appointment as Professor in one of the departments in the College. The College includes six departments: Astronomy, Chemistry, Geological Sciences, Mathematics, Physics, and Statistics, in addition to several cross-disciplinary degree programs, research centers, and institutes. The College has a faculty of 225 and an annual budget of \$80 million.

The position is available July 1, 2003. Salary and other considerations will be competitive and consistent with the University's commitment to recruiting the best-qualified individual. **To assure full consideration, applications and nominations should be received by October 15, 2002.** The Search Committee will begin screening dossiers on that date and will continue to receive applications until the Dean is selected.

Applications and nominations should be addressed to:

Chairperson, MAPS Dean Search Committee, Office of Academic Affairs, The Ohio State University, 203 Bricker Hall, 190 North Oval Mall, Columbus, OH 43210-1358

Website for the Search: <http://www.mps.ohio-state.edu/deansearch>. For further information, contact Molly Davis, Office of Academic Affairs, at 614/292-5881 or at Davis.436@osu.edu.

The Ohio State University is an Equal Opportunity, Affirmative Action Employer. Women, minorities, veterans, and individuals with disabilities are encouraged to apply.

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**CALIFORNIA INSTITUTE OF TECHNOLOGY
MATHEMATICS**

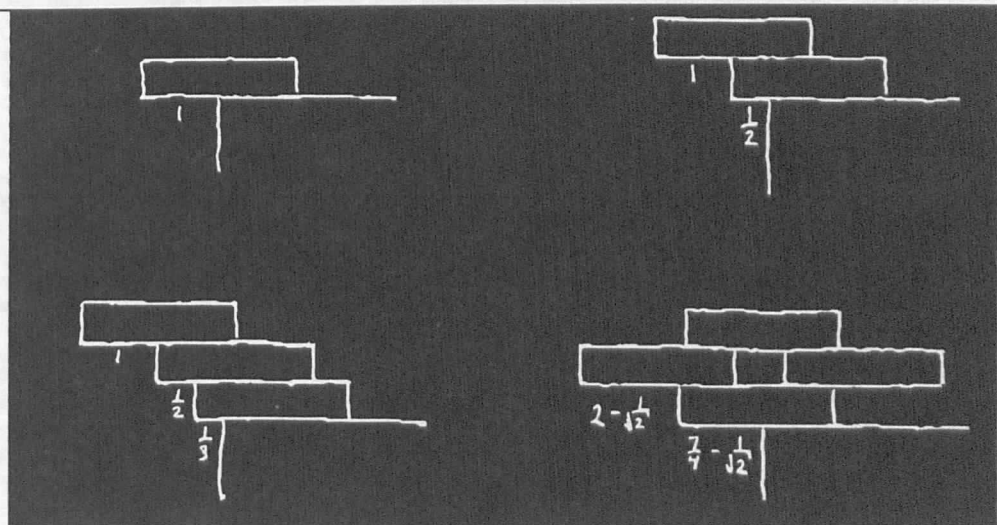
The Division of Physics, Mathematics, and Astronomy at the California Institute of Technology invites applications for a possible tenure-track position in Mathematics at the assistant professor level. We are particularly interested in the following research areas: Algebraic Geometry/Number Theory, Analysis/Dynamics, Combinatorics, Finite and Algebraic Groups, Geometry/Topology, Logic/Set Theory, and Mathematical Physics, but other fields may be considered. The term of the initial appointment is normally four years for a tenure-track assistant professor (with a possible extension to as much as seven years). Appointment is contingent upon completion of the Ph.D. Exceptional candidates may also be considered at the associate or full professor level. We are seeking highly qualified applicants who are committed to a career in research and teaching. Applicants should write promptly to:

TENURE-TRACK SEARCH
Mathematics 253-37
California Institute of Technology
Pasadena, CA 91125

Please include curriculum vitae, list of publications, description of research, and ensure that at least three letters of recommendation be sent to the above address. Caltech is an Affirmative Action/Equal Opportunity Employer. Women, minorities, veterans, and disabled persons are encouraged to apply.

Intrigued?

Then consider joining a highly talented group of mathematicians who deduce structure where it is not apparent, find patterns in seemingly random sets, created order out of chaos — these are the mathematicians of the National Security Agency. They apply Number Theory, Group Theory, Finite Field Theory, Linear Algebra, Probability Theory, Mathematical Statistics, Combinatorics, and more to a world of challenges. They exchange ideas and work with some of the finest minds — and most powerful computers — in the country.



Ready for the challenge? Contact: National Security Agency, Suite 6779, (LFE), 9800 Savage Road, Ft. George G. Meade, MD 20755-6779. Reasonable accommodation provided to applicants with disabilities during the application and hiring process where appropriate. Positions open to U.S. citizens only. NSA is an equal opportunity employer and abides by applicable employment laws and regulations.



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AUBURN UNIVERSITY - DEPARTMENT OF DISCRETE AND STATISTICAL SCIENCES MATHEMATICS - The Department of Discrete & Statistical Sciences Mathematics, at Auburn University, located in Auburn, Alabama invites applications for a tenure-track position as an Assistant Professor (or higher rank for candidates with exceptional qualifications) in statistics to begin Fall Semester 2003. Women and Ethnic Minorities are Encouraged to Apply. Ph.D in Statistics or Biostatistics required. Applicants should have solid theoretical training and evidence of teaching and research ability in statistics. Applicants with experience in biological applications or computing preferred. Interested individuals should send a vita, a letter of application and arrange for three letters of recommendations to be sent to: **Statistics Search Committee, Department of Discrete and Statistical Sciences, 235 Allison Lab, Auburn University, AL 36849-5307, USA.** Website address: <http://www.dms.auburn.edu>, Fax number: 334-844-3611. Review of applications will begin January 6, 2003. Auburn University is an Affirmative Action/Equal Opportunity Employer.

BROWN UNIVERSITY - DEPARTMENT OF MATHEMATICS - Up to three professorships at the Associate Professor level with tenure, the appointment to begin July 1, 2003. Exceptionally qualified candidates may be considered for appointment at the level of Professor. Candidates should have a distinguished research record and a strong commitment to excellence in undergraduate and graduate teaching. Preference will be given to applicants with research interests consonant with those of the present members of the Department (for a list of faculty members and their fields, see <http://www.math.brown.edu/faculty/faculty.html>). For one of the positions, preference will be given to applicants whose field is analysis. Applicants who wish to be considered for these positions should send a letter of application along with a curriculum vitae and arrange to have at least five letters of recommendation sent to: **Senior Search Committee, Department of Mathematics, Box 1917, Brown University, Providence, Rhode Island 02912.** Applications must be postmarked by **December 13, 2002**, in order to receive full consideration. Later applications will be accepted and considered to the extent feasible. Email inquiries can be addressed to srsearch@math.brown.edu. Brown University is an Equal Opportunity/Affirmative Action employer and encourages applications from women and minorities.

COLGATE UNIVERSITY - DEPARTMENT OF MATHEMATICS - The Mathematics Department of Colgate University is accepting applications for a tenure-track assistant professorship beginning August 2003. A PhD is expected by Fall of 2003. Applicants in all fields of mathematics are welcome; there may be some preference given to analysis. Colgate University is a highly-selective liberal arts college with 2700 students, about 50 miles from Syracuse, New York. Faculty members normally teach five courses per year and maintain active research programs. They are also expected to participate in all-university programs. Send a vita, a graduate transcript, and three letters of recommendation to **The Search Committee, Department of Mathematics, Colgate University, 13 Oak Drive, Hamilton, NY 13346.** Review of applications will begin on December 1. Colgate is an equal opportunity, affirmative action employer. Developing and sustaining a diverse faculty and staff furthers the University's educational mission. Applications from women and minorities are especially encouraged.

CORNELL UNIVERSITY - DEPARTMENT OF MATHEMATICS - The Department of Mathematics at Cornell University invites applications for the position of tenure-track Assistant Professor (or higher rank). We expect to have two or more positions. Start date July 1, 2003. For information about fields of interest and application requirements, refer to our website: <http://www.math.cornell.edu/Positions/positions.html>. Deadline November 1, 2002. Early applications will be regarded favorably. Send application and supporting materials to **Recruiting Committee, Department of Mathematics, Malott Hall, Cornell University, Ithaca, NY 14853-4201 USA.** E-mail: math_recruit@cornell.edu Cornell University is an Affirmative Action/Equal Opportunity Employer.

CORNELL UNIVERSITY - DEPARTMENT OF MATHEMATICS - Department of Mathematics invites applications for the following positions beginning July 1, 2003: (1) One H.C. Wang Assistant Professor, non-renewable, 3-year term; (2) Three VIGRE Postdoctoral Associates (contingent upon funding), non-renewable, 3-year term; beginning August 16, 2003; (3) Visiting positions, academic year or one semester teaching positions (any rank). For information about our positions and application requirements, see: <http://www.math.cornell.edu/Positions/positions.html>. Applicants will be automatically considered for all eligible positions. Deadline December 1, 2002. Early applications will be regarded favorably. Send application and supporting materials to **Recruiting Committee, Department of Mathematics, Malott Hall, Cornell University, Ithaca, NY 14853-4201 USA.** E-mail: math_recruit@cornell.edu. Cornell University is an Affirmative Action/Equal Opportunity Employer.

CORNELL UNIVERSITY - DEPARTMENT OF MATHEMATICS - The Cornell University Department of Mathematics invites applications for our Teaching Program Visiting Faculty Positions beginning August 16, 2003. Two or more half-time visiting positions (any rank) for mathematics professors on sabbatical/other leaves from colleges, universities, and engineering schools. Candidates with substantial experience teaching undergraduate mathematics, and with teaching and research interests compatible with current faculty, are sought. Successful candidates are expected to pursue a program of study and/or research at Cornell. For information about these positions and application requirements, see: <http://www.math.cornell.edu/Positions/positions.html> Deadline December 1, 2002. Send application and supporting materials to **Linda Clasby, Department of Mathematics, 320 Malott Hall, Cornell University, Ithaca, NY 14853-4201.** Cornell University is an Affirmative Action/Equal Opportunity Employer.

THE COURANT INSTITUTE OF MATHEMATICAL SCIENCES - NEW YORK UNIVERSITY - The Courant Institute is a center for advanced training and research in the mathematical sciences. It has long been an international leader in mathematical analysis, differential geometry, probability theory, applied mathematics, and scientific computation, with special emphasis on partial differential equations and their applications. Its scientific activities include an extensive array of research seminars and advanced graduate courses. Each year a limited number of Courant Institute Instructorships in the Department of Mathematics are awarded to postdoctoral scientists. These appointments carry a light teaching load of one course per semester and ordinarily are for a three-year term. These positions are primarily for recent Ph.D.'s and candidates must have a degree in mathematics or some affiliated field. For an application and further information write to: **Visiting Membership Committee, Courant Institute of Mathematical Sciences, 251 Mercer Street, New York, NY 10012-1185.** Forms may also be obtained directly from the web at <http://www.cims.nyu.edu/information/brochure/visiting.html> or by sending e-mail to vm-apply@cims.nyu.edu. Applications and supporting documents are due by December 15 for appointments to begin the following academic year. The Courant Institute at New York University is an Equal Opportunity/Affirmative Action Employer.

DARTMOUTH COLLEGE - DEPARTMENT OF MATHEMATICS - John Wesley Young Research Instructorship - 2 years, new or recent Ph.D.'s whose research overlaps dept. member's. Teach 4 ten-week courses spread over 2 or 3 quarters. \$43,800.00 for nine months; \$9,733.00 summer research stipend. Get all info. and required response-form at <http://www.math.dartmouth.edu/recruiting/>. Or, send letter of application, curriculum vitae, graduate school transcript, thesis abstract, statement of research plans and interests, and at least three, preferably four, letters of recommendation to **Donna Black, Department of Mathematics, Dartmouth College, 6188 Bradley Hall, Hanover, New Hampshire 0375-3551.** Files complete by January 5, 2003 considered first. Dartmouth College is committed to diversity and strongly encourages applications from women and minorities.

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DARTMOUTH COLLEGE - DEPARTMENT OF MATHEMATICS - Tenure-track Assistant Professorship opening anticipated, with initial appointment in the 2003-2004 academic year, in number theory, or "applicable mathematics." Someone in applicable mathematics should straddle the line of pure and applied mathematics, working in core mathematics with a record of interests in potential applications. Examples would include (but are not limited to) number theorists with interests in cryptography or coding theory, representation theorists who work in signal processing, combinatorialists with interests in computing, probabilists with interests in statistics, as well as more classical applied mathematicians. Projects are currently funded by NSF and DoD. Collaborations with the medical and engineering schools, and programs in computer science and cognitive neuroscience exist. Collaborations and/or appointments in Dartmouth's M.D./Ph.D. program, as well as Dartmouth's Institute for Secure Technologies Studies, are also possible. In number theory, we have interests in both algebraic and analytic number theory. Teaching duties consist of two courses per quarter for two ten-week quarters or one course for each of two quarters and two courses for one quarter. Get a copy of the application information and the required response form online at the department's Web site <http://www.math.dartmouth.edu/recruiting/>. Or, send a letter of application, curriculum vitae, and a brief statement of research results and interests. Four letters of recommendation should be sent, at least one of which specifically addresses teaching and, if your native language is not English, on your ability to use English in a classroom, to: **Donna Black, Recruiting Secretary, Department of Mathematics, Dartmouth College, 6188 Bradley Hall, Hanover, NH 03755-3551**. Applications received by January 5, 2003 considered first. Women and minorities are particularly encouraged to apply.

DARTMOUTH COLLEGE - DEPARTMENT OF MATHEMATICS - Senior Level in Applied Mathematics with initial appointment in the 2003-2004 academic year. The successful candidate will be acknowledged leader in his/her field with proven ability to work across disciplines and attract outside funding. Applicants with any of a wide variety of interests ranging from traditional applied fields and backgrounds, e.g. signal processing, mathematical statistics, PDE's, as well as new application areas such as informatics, quantum computing or applied algebra, are encouraged to apply. Various projects are currently funded by NSF NIH, NIMH, and DoD. Active collaborations with the medical and engineering schools, and programs in computer science and cognitive neuroscience exist. Collaborations and/or appointments in Dartmouth's M.D./Ph.D. program, as well as Dartmouth's Institute for Secure Technologies Studies, are also possible. Lab space in the new mathematics building will also be available and future hirings in applied mathematics are anticipated. Candidates must be committed to outstanding teaching and interaction with students at all levels of undergraduate and graduate study and be willing to advance applied mathematics across campus. To create an atmosphere supportive of research, Dartmouth offers new faculty members grants for research-related expenses, a quarter of sabbatical leave for each three academic years in residence and flexible scheduling of teaching responsibilities. The teaching responsibility in mathematics is two courses per quarter for two ten-week quarters or one course for each of two quarters and two courses for one quarter. The combination of committed colleagues and talented, responsive students encourages excellence in teaching at all levels. To apply, a copy of the application information and required response form may be obtained online from our web site at <http://www.math.dartmouth.edu/recruiting/>. Or, send a letter of application, curriculum vitae, and a brief statement of research results and interests; and arrange four letters of reference, at least one of which specifically addresses teaching, to **Donna Black, Recruiting Secretary, Dartmouth College, 6188 Bradley Hall, Hanover, NH 03755**. Applications received by December 6, 2002 will receive first consideration. Dartmouth College is committed to diversity and strongly encourages applications from women and minorities. Inquiries about the progress of the selection process may be directed to **Dan Rockmore, Professor of Mathematics and Computer Science, Dartmouth College, Hanover, NH 03755** or via email at Daniel.Rockmore@Dartmouth.edu.

DAVIDSON COLLEGE - DEPARTMENT OF MATHEMATICS - The Department of Mathematics anticipates an opening for a regular appointment at the Assistant Professor level with an initial two-year appointment to begin August 1, 2003. Completion or imminent completion of the Ph.D. is required. Candidates must be committed to outstanding teaching and continuing scholarly activity. The teaching load is 5 semester courses per year. A completed application consists of a statement of professional aspirations and goals, curriculum vitae, (photocopies of) graduate and undergraduate transcripts, and 3 letters of reference, of which at least one must specifically address the applicant's teaching. These materials should be sent to the attention of **Prof. Stephen Davis, Chair, Department of Mathematics, Davidson College, Box 6931, Davidson, NC 28035-6931**. (Email: stdavis@davidson.edu; see also the "Faculty Position" link at <http://www.davidson.edu/math/>.) Applications received by November 30, 2002, will receive fullest consideration. Davidson is a highly selective, nationally ranked four-year liberal arts college with a Presbyterian heritage. Davidson College is an Equal Opportunity Employer; women and minorities are encouraged to apply.

HARVEY MUDD COLLEGE - DEPARTMENT OF MATHEMATICS - Chair - Harvey Mudd College invites applications for a permanent position in mathematics at the full professor level. Demonstrated excellence in teaching is absolutely essential for all candidates, as is an established record of scholarship in the mathematical sciences. The successful candidate will begin service as department chair shortly after the appointment and will possess demonstrated leadership skills to support and mentor a young, enthusiastic department. Candidates should also be willing to supervise undergraduate research and work with others in the development of the undergraduate curriculum and other departmental programs. Harvey Mudd College is a highly selective undergraduate institution of science, engineering and mathematics with a median SAT score approaching 1500 and one year of high school calculus required for admission. Each year there are about 25 graduates in mathematics, CS/math, and mathematical biology with approximately half going to graduate school. Over 40% of mathematics alumni from HMC have entered PhD programs. The College enrolls about 700 students and is a member of the Claremont College consortium, which consists of four other undergraduate colleges, the Claremont Graduate University, and the Keck Graduate Institute of Applied Life Sciences, forming together an academic community of about 5000 students. There is an active and vital research community of over 40 mathematicians in the consortium. Claremont is situated approximately 35 miles east of downtown Los Angeles, at the foot of the San Gabriel mountains. The community is known for its tree-lined streets and village charm. It is an easy drive from Claremont to the cultural attractions of the greater Los Angeles area, as well as the ocean, mountains and deserts of southern California. Applicants should send a curriculum vita, a description of their teaching philosophy and accomplishments, a description of their current research program, and names and addresses of at least three persons as references. Only references of finalists for the position will be contacted. Applications will be reviewed as they are received, beginning September 15, and the position will remain open until filled. Harvey Mudd College is an equal opportunity employer and is committed to the recruitment of candidates historically underrepresented on college faculties. Further information about the college and department may be found at <http://www.math.hmc.edu>. Address for applications: **Professor H. A. Krieger, Chair, Mathematics Senior Search Committee, Mathematics Department, Harvey Mudd College, Claremont, CA 91711-5990**.

HVERFORD COLLEGE - DEPARTMENT OF MATHEMATICS - Haverford College seeks to fill a tenure-track position in mathematics at the assistant professorial level, beginning Fall 2003. Candidates should have a strong commitment to teaching and research, and should demonstrate significant experience and potential for growth in both. Those specializing in analysis or geometry, with applied interests, are especially sought; but all candidates in mathematics, applied mathematics and statistics are invited to apply. Candidates should be prepared to teach a broad spectrum of courses at the undergraduate level, as well as courses in their research areas. Send a cover letter explaining your interest in the position, curriculum vitae, statements of teaching and research interests and activities, and three letters of recommendation to **Kay Warner, Mathematics Search Committee, Haverford College, Haverford PA 19041** by December 1, 2002 to ensure full consideration. Haverford College is an Equal Opportunity/Affirmative Action Employer. Women and minority candidates are strongly encouraged to apply.

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INSTITUTE FOR ADVANCED STUDY - SCHOOL OF MATHEMATICS - The School of Mathematics has a limited number of memberships, some with financial support for research in mathematics at the Institute during the 2003-2004 academic year. Candidates must have given evidence of ability in research comparable at least with that expected for the Ph.D. degree. Carlos Kenig will be the Distinguished Visiting Professor during the academic year and will lead a program on analysis and non-linear PDE's. The School of Mathematics and the Department of Mathematics at Princeton University have established the Veblen Research Instructorship. The instructorship position is a three-year appointment with the first and third year spend at Princeton University and the second year at the Institute. A limited number of instructorships are offered each year to candidates who have received their Ph.D. within the last three years. Information about membership, the Instructorship positions, and application forms may be requested from **Applications, School of Mathematics, Institute for Advanced Study, Einstein Drive, Princeton, NJ 08540**. Telephone (609) 734-8112. E-mail address: applications@math.ias.edu. Forms may be downloaded, but not submitted via a web connection to: <http://www.math.ias.edu> Deadline for Applications: December 1, 2002. URL for more information about the position or institution/company: <http://www.math.ias.edu>

INSTITUTE FOR MATHEMATICS AND ITS APPLICATIONS - UNIVERSITY OF MINNESOTA - The University of Minnesota, Minneapolis, Minnesota announces membership opportunities in connection with its 2003-2004 thematic program on **PROBABILITY AND STATISTICS IN COMPLEX SYSTEMS: GENOMICS, NETWORKS, AND FINANCIAL ENGINEERING** <http://www.ima.umn.edu/complex>. Individuals may apply for three classes of membership at the IMA in connection with the 2003-2004 thematic program: IMA postdoctoral memberships, IMA industrial postdoctoral memberships, and general IMA memberships. **IMA POSTDOCTORAL MEMBERSHIPS** provide an excellent opportunity for mathematical scientists near the beginning of their career who have a background in or an interest in learning about probability, statistics, and complex systems. IMA postdoctoral memberships run two years starting September 2, 2003. In the second year of the appointment there are a variety of options to enhance career development, including participation in the 2004-2005 academic year program on "Mathematics of Materials and Macromolecules: Multiple Scales, Disorder, and Singularities." **IMA INDUSTRIAL POSTDOCTORAL MEMBERSHIPS** are designed to prepare mathematicians for research careers in industry or involving industrial interaction. IMA industrial postdoctoral memberships run two years starting September 2, 2003. They are funded jointly by the IMA and an industrial sponsor, and holders devote 50% effort to the IMA program and 50% effort working with industrial scientists. Industrial sponsors are typically IMA Participating Corporations. **GENERAL IMA MEMBERSHIPS** provide an opportunity for mathematicians and scientists employed elsewhere to spend a period of one month to one year in residence at the IMA, and to participate in the 2003-2004 program on "Probability and Statistics in Complex Systems: Genomics, Networks, and Financial Engineering." The residence should fall in the period June 1, 2003 through August 31, 2004. Logistical support such as office space, computer facilities, and secretarial support will be provided, and local expenses may be provided. Preference will be given to supplementary support for persons with sabbatical leaves, fellowships, or other stipends. All IMA members are provided with an excellent and extremely stimulating research environment and connection with a large community of first class researchers. The postdoctoral memberships, regular and industrial, include a mentorship program, a salary of \$45,000 annually, and a travel allowance. Postdoctoral applicants must have completed all requirements for a doctorate by September 2, 2003 and must show evidence of mathematical excellence. Application forms and instructions are available at <http://www.ima.umn.edu/docs/genapp.html>. Completed applications, including supporting materials, must be received by the IMA by January 15, 2003. Questions should be directed to applications@ima.umn.edu or by phone to (612) 624-6066. The University of Minnesota is an equal opportunity educator and employer.

JOHNS HOPKINS UNIVERSITY - DEPARTMENT OF MATHEMATICS - The Department of Mathematics invites applications for two positions at the Associate or Full Professor level in the general areas of analysis, algebra, topology, number theory, and mathematical physics beginning Fall 2003 or later. Targeted areas of hiring are number theory and mathematical physics. Applicants should send a cover letter, curriculum vitae, and contact information for three professional references to **Chair, Hiring Committee, Johns Hopkins University, 3400 N. Charles Street, Krieger 404, Baltimore, MD 21218**. First round preference will be given to applications received by January 1, 2003. The Johns Hopkins University is an Affirmative Action/Equal Opportunity Employer and actively encourages interest from minorities and women.

JOHNS HOPKINS UNIVERSITY - DEPARTMENT OF MATHEMATICS - Director of Undergraduate Studies - The Department of Mathematics invites applications for the Director of Undergraduate Studies at the non-tenure track rank of Lecturer beginning Fall 2003. The position is renewable depending on performance. Required qualifications include M.A. or Ph.D. in mathematics; creative teacher with college teaching experience; ability to work well with others and play a leading role in curriculum development and using technology in teaching. The duties will involve administering the basic elementary mathematics courses: Pre-calculus, Calculus I, II, III, Linear Algebra, and Differential Equations. Responsibilities include supervision and training of Teaching Assistants, advising undergraduates, and coordinating course enrollment and scheduling with the Registrar and Office of Academic Advising. Applicants should send a cover letter, curriculum vitae, and contact information for three professional references to **Department Chair - Lecturer Hiring, Johns Hopkins University, 3400 N. Charles Street, Krieger 404, Baltimore, MD 21218**. First round preference will be given to applications received by November 15, 2002. The Johns Hopkins University is an Affirmative Action/Equal Opportunity Employer and actively encourages interest from minorities and women.

NORTHWESTERN UNIVERSITY - DEPARTMENT OF MATHEMATICS - Applications are invited for anticipated tenure-track or tenured positions starting September 2003, pending final approval. Priority will be given to exceptionally promising research mathematicians. Fields of interest within the department include Algebra, Algebraic Geometry, Analysis, Dynamical Systems, Mathematical Physics, Probability, Partial Differential Equations, and Topology. Application material should be sent to **Personnel Committee, 2033 Sheridan Road, Evanston, Illinois 60208-2730**, and include: (1) the American Mathematical Society's Application Cover Sheet for Academic Employment, (2) a curriculum vitae, and (3) at least four letters of recommendation including one which discusses in some detail the candidate's teaching qualifications. Inquiries may be sent via e-mail to: hiring@math.northwestern.edu. Applications are welcome at any time, but the review process starts in October 2002. Northwestern University is an affirmative action, equal opportunity employer committed to fostering a diverse faculty; women and minority candidates are especially encouraged to apply.

NORTHWESTERN UNIVERSITY - DEPARTMENT OF MATHEMATICS - Boas Assistant Professor - Applications are solicited from people whose research is in geometry and geometric topology for two Ralph Boas assistant professorships of three years each starting in September 2003. These positions are connected to the Emphasis Year in Geometry and Topology of String Theory. They are non-tenure track. Applications should be sent to the **Emphasis Year Committee, 2033 Sheridan Road3, Evanston, Illinois 60208-2730**, and include: (1) the American Mathematical Society's Application Cover Sheet for Academic Employment, (2) a curriculum vitae, and (3) three letters of recommendation including one which discusses in some detail the candidate's teaching qualifications. Inquiries may be sent via e-mail to: hiring@math.northwestern.edu. Applications are welcomed at any time, but the review process starts December 1, 2002. Northwestern University is an affirmative action, equal opportunity employer committed to fostering a diverse faculty; women and minority candidates are especially encouraged to apply.

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OHIO STATE UNIVERSITY - DEPARTMENT OF MATHEMATICS - The Department of Mathematics of the Ohio State University expects to have tenure-track/tenured positions and several visiting positions available, effective Autumn Quarter 2003. Candidates in all areas of pure and applied mathematics are invited to apply. Significant mathematical research accomplishment and evidence of excellent teaching ability are required. The department will also have several Hans J. Zassenhaus Assistant Professorships and VIGRE Arnold Ross Assistant Professorships available. These term positions are renewable annually for up to a total of three years. Candidates are expected to present evidence of excellence in research and teaching. Please send a CV and have at least three letters of recommendation sent to: **Professor Peter March, Chair, Department of Mathematics, The Ohio State University, 231 W. 18th Avenue, Columbus, OH 43210**. The Ohio State University is an Equal Opportunity, Affirmative Action employer. Women, Minority, veterans, and individuals with disabilities are encouraged to apply.

OHIO STATE UNIVERSITY - MATHEMATICAL BIOSCIENCES INSTITUTE - The Mathematical Biosciences Institute (MBI) is accepting applications for post-Doctorate positions beginning in September 2003, and renewable for up to 3 years. The deadline for applications is January 15, 2003. Short- and long-term visitors may apply at any time. To access the application form or for more information, visit the MBI website at <http://mbi.osu.edu> or call (614) 292-3648.

PURDUE UNIVERSITY - DEPARTMENT OF MATHEMATICS - Applications are invited for tenure-track Assistant Professor or three-year Research Assistant Professor appointments beginning August 2003. Ph.D. by August 18, 2003, exceptional research promise, and strong teaching record required. Applications will also be accepted for possible appointments at the Associate Professor/Professor level. Ph.D. and excellence in research and teaching required. Outstanding applicants from various mathematical research areas will be considered. Because the department has several openings in applied mathematics, candidates who have significant research accomplishments in applied mathematics or computational applied mathematics are especially encouraged to apply. Several positions may be available for terms ranging from one semester to two years beginning August 2003. All applicants should have research interests in common with Purdue faculty. Send vita, summary of research interests/plans, and arrange for three letters of recommendation (one addressing teaching) to be sent to: **Head, Department of Mathematics Purdue University, West Lafayette, IN 47907-1395**. Review of applications will begin November 15, 2002 and continue until available positions are filled. Offers for tenure-track positions may be made at any time; some offers for RAP and visiting positions will be made before the end of January 2003. Purdue University is an Affirmative Action/Equal Opportunity Employer.

QUEEN'S UNIVERSITY - DEPARTMENT OF MATHEMATICS AND STATISTICS - The Department of Mathematics and Statistics invites applications for a tenure-track appointment at the Assistant Professor level to begin July 2003, and a Tier II Canada Research Chair in Pure Mathematics. Successful applicants for the tenure track position must have a strong research record and the ability to develop an independent research programme; applicants for the Canada Research Chair must have international stature. All candidates must have the ability to teach a range of mathematics or statistics courses and supervise graduate students. Salary will be commensurate with qualifications and experience. Candidates should have a Ph.D. in pure or applied mathematics, statistics, or a related area and will have begun an active research program in algebra and number theory, analysis, dynamical systems, or probability and statistics. Interested candidates should arrange for a curriculum vitae, a description of research interests, up to five publications or preprints, a statement on teaching or a teaching dossier, and at least four letters of reference, one of which should comment on the candidate's teaching, to be sent to the address below by December 1, 2002. Applications will be considered until the position is filled. More details are available at <http://www.mast.queensu.ca/jobs/>. **James A. Mingo, Associate Head Department of Mathematics and Statistics Queen's University, Kingston Ontario, K7L 3N6**. fax: (613) 533-2964, e-mail: position@mast.queensu.ca, <http://www.mast.queensu.ca> Canadian citizens and permanent residents will be considered first for this position. Queen's University is committed to employment equity and welcomes applications from all qualified women and men, including visible minorities, aboriginal people, persons with disabilities, gay men and lesbians.

SAN FRANCISCO STATE UNIVERSITY - DEPARTMENT OF MATHEMATICS - The University will have four tenure-track assistant professor positions in mathematics starting Fall, 2003. Outstanding candidates in all areas of mathematics and statistics are encouraged to apply. Excellence in research and teaching are expected, and an earned Ph.D. is required. Special consideration will be given to candidates in statistics, geometry/topology and applied mathematics. Salary to be negotiated and commensurate with experience. The Department has 20 tenured/tenure-track faculty dedicated to creating an outstanding environment for professional achievement and education. SFS is a comprehensive urban university of 19,000 undergraduate and 6,000 graduate students located in a vibrant city with a rich intellectual and cultural life. The university is an Affirmative Action/Equal Opportunity Employer committed to achieving excellence through diversity; applications are strongly encouraged from underrepresented groups. Send vita, research plan, statement of teaching philosophy and have at least three letters of recommendation sent to: **Hiring Committee, Dept. of Mathematics, San Francisco State University, San Francisco, CA 94132**. The application deadline is December 7, 2002.

SEATTLE UNIVERSITY - DEPARTMENT OF MATHEMATICS - Seattle University invites applications for at least one tenure-track position in mathematics beginning September 2003. The position is open to mathematicians in any area of pure mathematics, but preference may be given to those whose teaching and research interests complement those of our mathematics faculty. The position will be filled at the rank of assistant professor or, possibly, at the rank of associate professor for an exceptional applicant with qualifications and teaching experience appropriate to the associate professor level. Requirements for the position include: a Ph.D. in mathematics; demonstrated excellence in teaching undergraduate mathematics; strong teaching recommendations; a commitment to continued scholarly growth, to the use of technology in teaching, and to contributing to the mission of Seattle University. A complete application must include an AMS Standard Cover Sheet, curriculum vitae, unofficial graduate transcripts, statements of your teaching philosophy and research plans, and three confidential letters of reference including phone numbers. Your application should also include a cover letter which addresses how you could contribute to our mission. Please send to: **Mathematics Search Committee, Mathematics Department, Seattle University, 900 Broadway, Seattle, WA 98122-4340**. Closing date: Wednesday, December 4, 2002. Seattle University is an equal opportunity, affirmative action employer. For more information about the Mathematics Department at Seattle University as well as this position, visit our website at <http://www.seattleu.edu/scieng/math>.

SOUTHERN ILLINOIS UNIVERSITY, EDWARDSVILLE - DEPARTMENT OF MATHEMATICS AND STATISTICS - SIUE, a comprehensive state university 20 miles from downtown St. Louis, Missouri, invites applications for a tenure-track position in Applied Mathematics at the rank of assistant professor beginning August 2003. Applicants should have a Ph.D. in some field of mathematics. We will consider applicants who have a strong commitment to teaching, and a demonstrated capacity to perform research. Preference will be given to candidates with a strong background in applied mathematics, numerical analysis, or computational mathematics; the successful candidate will teach precalculus, calculus, differential equations, discrete math, numerical analysis, and other upper level courses in mathematics and applied mathematics. The Department of Mathematics & Statistics has 17 full time faculty members and offers undergraduate programs in mathematics, applied mathematics, statistics, actuarial science, and secondary education, and master's programs in mathematics, statistics & operations research, and computational mathematics. Send a letter of application, curriculum vita, transcripts (unofficial transcripts are acceptable for now), and three letters of recommendation to: **Chair of Search Committee, Department of Mathematics and Statistics, Campus Box 1653A, Southern Illinois University Edwardsville, Edwardsville, IL 62026**. Please use the AMS Standard Cover Sheet. Review of applications will begin on December 5, 2002 and continue until the position is filled. As an affirmative action employer, SIUE offers equal employment opportunity without regard to race, color, creed or religion, age, sex, national origin, or disability.

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STANFORD UNIVERSITY - DEPARTMENT OF MATHEMATICS - The Department is considering applications for tenure-track or tenured faculty appointments. The research fields to be considered are: (1) analysis, (2) algebra, number theory, or logic, (3) geometry or topology, (4) combinatorics, (5) applied mathematics or probability; in the last case there are also possibilities for joint appointments with other departments. Candidates should send a letter of application with a curriculum vitae, a list of publications, and a cover sheet clearly stating the following information: name, area of specialization, institution, date of PhD, and PhD advisor. Also the candidate should arrange to have at least three letters of recommendation (junior candidates only) and evidence of commitment to excellence in teaching sent to **Search Committee, Department of Mathematics, Stanford University, Stanford, CA 94305** by January 1, 2003. Stanford is an Affirmative Action, Equal Opportunity Employer. Women and minorities are particularly encouraged to apply.

STANFORD UNIVERSITY - DEPARTMENT OF MATHEMATICS - The Department expects to make one or more Szego Assistant Professor appointments. These appointments are for a term of three years beginning in September 2003. Applicants are expected to show outstanding promise in research as well as strong interest and ability in teaching. They must have received the PhD prior to the start of the appointment, but not before 2000. Candidates should send a letter of application with a curriculum vitae and list of publications, a teaching statement and supporting information including a teaching letter if possible, and three letters of recommendation to Szego Search Committee, Department of Mathematics, Stanford University, Stanford, CA 94305 by December 15, 2002. Stanford is an Affirmative Action, Equal Opportunity Employer, and welcomes applications from women and minorities.

UNIVERSITY OF CALIFORNIA, BERKELEY - DEPARTMENT OF MATHEMATICS - Tenured Or Tenured Track Position - Pending budget approval, we invite applications for one or more positions effective July 1, 2003 at either the tenure-track (Assistant Professor) or tenured (Associate or Full Professor) level, in the general areas of pure or applied mathematics. Tenure track applicants are expected to have demonstrated outstanding research potential, normally including major contributions beyond the doctoral dissertation. Such applicants should send a resume, and reprint or preprints, and/or dissertation abstract, and ask three people to send letters of evaluation to The Vice Chair for Faculty Affairs at the above address. It is the responsibility of the tenure track applicants to make sure that letters of evaluation are sent. All letters of evaluation are subject to Berkeley campus policies on confidentiality of letters of evaluation, a summary of which can be found on our home page (<http://math.berkeley.edu> by clicking on available teaching positions). Tenure applicants are expected to demonstrate leadership in research and should send a curriculum vitae, list of publications, a few selected reprints or preprints, and the names and addresses of three references to: **The Vice Chair for Faculty Affairs, Department of Mathematics, University of California at Berkeley, Berkeley, CA 94720**. Applicants should indicate whether they are applying for an Associate Professor or a Full Professor position. The department will assume responsibility to solicit letters of evaluation and will provide evaluators with a copy of the summary of policies on confidentiality of letters of evaluation. All applicants are requested to use the AMS standardized application form and to indicate their subject area using the AMS subject classification numbers. The form is the Academic Employment in Mathematics, Application Cover Sheet, it is available courtesy of the American Mathematical Society. Applications for both Tenure track and Tenure applications must be postmarked by November 15, 2002. Applications postmarked after the deadline will not be considered. The University of California is an Equal Opportunity, Affirmative Action Employer.

UNIVERSITY OF CALIFORNIA, BERKELEY - DEPARTMENT OF MATHEMATICS - Charles B. Morrey Jr. Assistant Professorships - We invite applications for these special (nontenure-track) positions effective July 1, 2003. The terms of these appointments may range from two to three years. Applicants should have a recent Ph.D., or the equivalent, in an area of pure or applied mathematics. Applicants should send a resume, reprints, preprints and/or dissertation abstract, and ask three people to send letters of evaluation to: **The Vice Chair for Faculty Affairs, Department of Mathematics, University of California at Berkeley, Berkeley, CA 94720**. All letters of evaluation are subject to Berkeley campus policies on confidentiality of letters of evaluation, a summary of which can be found on our home page (<http://math.berkeley.edu> by clicking on available teaching position, and then confidentiality policy). We request that applicant's use the AMS standardized application form and indicate their subject area using the AMS subject classification numbers. The form is the Academic Employment in Mathematics, Application Cover Sheet, it is available courtesy of the American Mathematical Society. Applications must be postmarked by December 1, 2002. Applications postmarked after the deadline will not be considered. The University of California is an Equal Opportunity, Affirmative Action Employer.

UNIVERSITY OF CALIFORNIA, BERKELEY - DEPARTMENT OF MATHEMATICS - Temporary Postdoctoral Positions - Several temporary positions beginning in Fall 2003 are anticipated for new and recent Ph.D.'s of any age, in any area of pure or applied mathematics. The terms of these appointments may range from one to three years. Applicants for NSF or other postdoctoral fellowships are encouraged to apply for these positions. Mathematicians whose research interests are close to those of regular department members will be given some preference. Applicants should send a resume and reprints, preprints, and/or dissertation abstract, and ask three people to send letters of evaluation to: **The Vice Chair for Faculty Affairs, Department of Mathematics, University of California at Berkeley, Berkeley, CA 94720**. All letters of evaluation are subject to Berkeley campus policies on confidentiality of letters of evaluation, a summary of which can be found on our home page (<http://math.berkeley.edu> by clicking on available teaching position, and then confidentiality policy). We request that applicant's use the AMS standardized application form and indicate their subject area using the AMS subject classification numbers. The form is the Academic Employment in Mathematics, Application Cover Sheet, it is available courtesy of the American Mathematical Society. Applications must be postmarked by December 1, 2002. Applications postmarked after the deadline will not be considered. The University of California is an Equal Opportunity, Affirmative Action Employer.

UNIVERSITY OF CALIFORNIA, LOS ANGELES - DEPARTMENT OF MATHEMATICS - Subject to availability of resources and administrative approval, the following positions are available for the 2003-04 Academic year. (1) Several tenure-track and senior positions in all areas of mathematics. (2) Several E.R. Hedrick Assistant Professorships. Salary is \$53,200. Three year appointment. Teaching load: four quarter courses per year, which may include one advanced course in the candidate's field. (3) Several Research Assistant Professorships in Computational and Applied Mathematics (CAM). Salary is \$53,200. Three year appointment. Teaching load: normally is reduced to two or three quarter courses per year by research funding as available; may include one advanced course in the candidate's field. (4) Several Adjunct Assistant Professorships or Lectureships in the Program in Computing (PIC). Applicants for the Adjunct position must show very strong promise in teaching and research in an area related to computing. Teaching load: four one-quarter programming courses each year and one seminar every two years. One-year initial appointment, with the option of applying for renewal for a second year and possible longer, up to a maximum service of four years. Salary is \$56,800. Applicants for the Lectureship must show very strong promise in the teaching of programming. An M.S. in Computer Science or equivalent degree is preferred. Teaching load: six one-quarter programming courses per year. One-year appointment, probably renewable one or more times, depending on the needs of the program. Salary is \$43,152 or more, depending on experience. (5) Several VIGRE Assistant Professorships. Hedrick, CAM, or PIC applicants, who are U.S. citizens or permanent residents, may also apply for a VIGRE Assistant Professor position. Three-year appointment. Salary is \$53,200. The successful recipient will receive a summer stipend of \$6,500 for two summers and \$2,500 per year for travel, equipment, and supplies for three years. Teaching load: 3 courses per year. (6) Several Adjunct Assistant Professorships and Research Postdocs. Up to one year appointment, with the possibility of renewal. Strong research [→]

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[←] and teaching background required. Salary \$48,900-\$53,200. Teaching load for Adjuncts: five quarter courses per year. (7) Several visiting instructorships. For more details, see <http://www.math.ucla.edu/~search>. To apply, complete the application on the website, or send e-mail to search@math.ucla.edu or write to: **Staff Search, Department of Mathematics, University of California, Los Angeles, CA 90095-1555**. Preference will be given to applications completed by January 6, 2003. UCLA is an Equal Opportunity/Affirmative Action Employer. Under Federal law, the University of California may employ only individuals who are legally authorized to work in the United States as established by providing documents specified in the Immigration Reform and Control Act of 1986.

UNIVERSITY OF CALIFORNIA AT SANTA BARBARA - DEPARTMENT OF STATISTICS AND APPLIED PROBABILITY - invites applications for a Lecturer with Potential Security of Employment position, to begin July 1, 2003. Qualifications: excellence in teaching and a Ph.D. in statistics or a closely related field. Primary duties include (but are not limited to) teaching and advising of undergraduate students. Please send resume, one page statement of teaching and research objectives, and three letters of recommendation to: **Lecturer Search Committee, Department of Statistics and Applied Probability, University of California, Santa Barbara, CA 93106-3110, USA**. The selection process will begin December 1, 2002 and continue until the position is filled. Women and minorities are particularly encouraged to apply. An EE/AO employer.

UNIVERSITY OF CALIFORNIA AT SANTA BARBARA - DEPARTMENT OF MATHEMATICS - Faculty Positions - The University of California, Santa Barbara invites applications for the following anticipated positions in the Department of Mathematics, with the appointments to be effective July 1, 2003. **ASSISTANT PROFESSOR POSITION:** Candidates for this tenure track position must possess a Ph.D. by September 2003. The department's priority is analysis, but all fields will be considered. Demonstrated research excellence and potential to become an effective teacher are required. Candidates who best enhance the long-term research plans of the department will be given preference. **VISITING POSITIONS:** One or more special one-year visiting assistant professorships may be available, with possibility of renewal for additional years, up to three years in total. These positions carry a teaching load of four one-quarter courses per year. Excellence in research, potential for interaction with faculty at UC Santa Barbara, and evidence of good teaching are required. Candidates must possess a Ph.D. by September 2003. Applicants for these positions should send application materials to the appropriate committee, the **ASSISTANT PROFESSOR COMMITTEE or the VISITING ASSISTANT PROFESSOR COMMITTEE, at the Department of Mathematics, University of California, Santa Barbara, CA 93106-3080**. These materials should include a vita, a publication list, a statement of research interests and teaching philosophy and the American Mathematical Society Cover Sheet (available online at <http://www.ams.org>). Include an email address and fax number if available. Applicants should also arrange to have at least four letters of recommendation (at least one of which is directed towards teaching) sent to the appropriate committee. Applicants for the tenure track position will automatically be considered for the visiting positions unless noted otherwise, so duplicate applications are unnecessary. Applications which are postmarked by December 20, 2002 will be given full consideration. UCSB is an affirmative action/equal opportunity employer.

UNIVERSITY OF CALIFORNIA, SANTA CRUZ - DEPARTMENT OF MATHEMATICS - One or more Youngs Visiting Assistant Professorships effective Summer or Fall 2003. We invite applications from qualified mathematicians in all fields. Appointees are expected to teach and pursue their research. Available for periods of two years, with a possible extension to a third year depending on teaching performance. Minimum qualifications: Ph.D. (or equivalent expected by 6/30/03) in Mathematics or a closely related field. Demonstrated excellence in research and teaching. Salary Range: \$46,300 - 51,700 (subject to range adjustment). Deadline: January 13, 2003. Applicants should send curriculum vitae, a summary of research and teaching experience and three letters of recommendation with at least one letter addressing teaching experience and ability (all letters will be treated as confidential documents). Please refer to provision #T03-02 in your reply. All applications should be sent to: **Recruitment Committee, Mathematics Department, Kerr Hall, University of California, Santa Cruz, CA 95064**. Inquiries [not applications] can be sent to mathrcr@cats.ucsc.edu. UCSC is an EEO/AA employer.

UNIVERSITY OF ILLINOIS AT CHICAGO - DEPARTMENT OF MATHEMATICS, STATISTICS, AND COMPUTER SCIENCE - The Department has active research programs in centrally important areas of pure mathematics, computational and applied mathematics, combinatorics and computer science, statistics, and mathematics education. See <http://www.math.uic.edu> for more information. Applications are invited for the following positions, effective August 21, 2003. Tenure track or tenured positions subject to budgetary approval. Candidates in all areas of interest to the Department will be considered. The position, subject to budgetary approval, is initially budgeted at the Assistant Professor level, but candidates with a sufficiently outstanding research record may be considered at higher levels. Applicants must have a Ph.D. or equivalent degree in mathematics, computer science, statistics, mathematics education or related field, an outstanding research record, and evidence of strong teaching ability. The salary is negotiable. Research Assistant Professorships/VIGRE Postdoctoral Fellowships. These are non-tenure track positions, normally renewable annually to a maximum of three years. Some of these positions are partially funded by a VIGRE grant from the NSF and are open only to U.S. citizens, nationals or permanent residents. Others are open without this restriction. These positions carry a teaching load of one course per semester, and the expectation that the incumbent play a significant role in the research life of the Department. The salary for AY 2003-2004 for these positions is \$47,000; the salary for AY 2004-2005 may be higher; in each of the first two years, for those eligible, the VIGRE grant provides an additional \$6,000 for summer support. Applicants must have a Ph.D. or equivalent degree in mathematics, computer science, statistics, mathematics education or related field, and evidence of outstanding research potential. Send vita and at least 3 letters of recommendation, clearly indicating the position being applied for, and whether you are eligible for a VIGRE fellowship, to: **Appointments Committee; Dept. of Mathematics, Statistics, and Computer Science; University of Illinois at Chicago; 851 S. Morgan (M/C 249); Chicago, IL 60607**. No e-mail applications will be accepted. To ensure full consideration, materials must be received by November 31, 2002, for the tenure/tenure track positions, and December 13, 2002 for the postdoctoral fellowships. However, we will continue considering candidates until all positions have been filled. Minorities, persons with disabilities, and women are particularly encouraged to apply. UIC is an AA/EOE.

UNIVERSITY OF LOUISVILLE - DEPARTMENT OF MATHEMATICS - Pending administrative approval, the Department of Mathematics at the University of Louisville invites applications for two tenure-track positions, at the assistant professor level, to begin July 1, 2003. Ph.D. required. Preference will be given to applicants who can strengthen the Department's new Ph.D. program and applicable mathematics offerings. Candidates must show strong potential in research and teaching and have effective communication skills. Applications should include: (1) the American Mathematical Society's standard cover sheet, (2) curriculum vitae, (3) summary of research interests, (4) statement of teaching qualifications, and (5) at least four letters of recommendation, including letters which discuss, in some detail, the candidates teaching and research qualifications. Applications should be sent to: **Search Committee, Department of Mathematics, University of Louisville, Louisville, KY 40292**. Review of applications will begin November 15, 2002 and continue until the position is filled. Email questions to math@louisville.edu. The University of Louisville is an Affirmative Action/Equal Opportunity Employer and encourages women and underrepresented minorities to apply. Applicants must comply with the provisions of the Immigration Reform and Control Act.

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UNIVERSITY OF MARYLAND, COLLEGE PARK - CENTER FOR BIOINFORMATICS AND COMPUTATIONAL BIOLOGY - Director And 7 Faculty Positions - The University invites faculty applications at the assistant, associate, and full professor level for the newly established Center for Bioinformatics and Computational Biology. The campus has committed resources to recruit up to 8 new faculty in the Center, including a Director. It is anticipated that the primary specialization areas of the faculty will collectively span fields of computer science, mathematics & statistics, biology, and biochemistry. Their primary responsibility will be to lead a nationally visible research program in selected areas of computational genomics, proteomics, molecular evolution and phylogenetics, complementing existing strengths at the University. Candidates for the Director position are expected to be senior researchers with prominent recognition in these areas. All other applicants are expected to have publications and research experience beyond the Ph.D degree with strong components of biological science and computing. Experience in interdisciplinary collaboration is an asset. The faculty will be housed in contiguous space set aside for the Center and will have access to significant high -end computing infrastructure through the Univ. of Maryland Institute for Advanced Computer Studies. Each faculty member will also be affiliated with at least one other campus academic unit appropriate to her/his interests. There is ample potential for collaboration with other outstanding bioinformatics research groups nearby, in organizations such as NIH, Celera, TIGR, the Maryland Biotechnology Institute, and the Smithsonian Institution. To apply, send a letter of application, curriculum vitae, letters of recommendation, and URL for additional information to the search committee, in care of the appropriate departmental representative. See <http://www.umiacs.umd.edu/centers/bio.htm> for more information about the Center and the application procedure. The University of Maryland is an affirmative action, equal opportunity employer. Women and minorities are encouraged to apply. Applications completed by November 30, 2002 will receive full consideration.

UNIVERSITY OF MICHIGAN, ANN ARBOR - DEPARTMENT OF MATHEMATICS - The Department has several openings at the tenure-track or tenure level. Candidates should hold a Ph.D. in mathematics or a related field, and should show outstanding promise and/or accomplishments in both research and teaching. Applications are encouraged from any area of pure, applied, computational, or interdisciplinary mathematics, including mathematical biology, theoretical computer science, and actuarial or financial mathematics. Salaries are competitive and are based on credentials. Applicants should send a CV, bibliography, descriptions of research and teaching experience, and have three or four letters of recommendation, at least one of which addresses the candidate's teaching experience and capabilities, sent to: **Personnel Committee, University of Michigan, Department of Mathematics, 2074 East Hall, Ann Arbor MI 48109-1109**. Applications are considered on a continuing basis but candidates are urged to apply by November 1, 2002. Inquiries may be made by e-mail to math-facsearch@umich.edu. More detailed information regarding the Department may be found on our web page: <http://www.math.lsa.umich.edu>. The University of Michigan is an equal opportunity, affirmative action employer.

UNIVERSITY OF MICHIGAN, ANN ARBOR - DEPARTMENT OF MATHEMATICS - Assistant Professorships, VIGRE Assistant Professorships, and T.H. Hildebrandt Research Assistant Professorships - These positions for up to three years are designed to provide mathematicians with favorable circumstances for academic career development in both research and teaching. Assistant Professorships have a teaching responsibility of two courses per semester; the VIGRE and T.H. Hildebrandt positions have a responsibility of one course per semester. These positions may be combined with other postdoctoral fellowships giving additional reductions in teaching responsibility. Preference will be given to candidates who received the Ph.D. degree 2001 or later and who submit a completed application by December 13, 2002. Salary is competitive and there are opportunities for supplemental summer salary. Application forms and further important information are available at <http://www.math.lsa.umich.edu/information/positions.shtml>, by Email at math-facsearch@umich.edu, or by mail from: **Hiring Committee, Department of Mathematics, University of Michigan, 2074 East Hall, 525 E. University Ave., Ann Arbor, MI 48109-1109**.

UNIVERSITY OF MINNESOTA, MINNEAPOLIS - SCHOOL OF MATHEMATICS - Dunham Jackson Assistant Professor - This is a three-year appointment from fall semester, 2003 through spring semester, 2006 with a teaching load of 3 one-semester courses per academic year. Outstanding research and teaching abilities required. Preference will be given to applicants whose research interests are compatible with those of the School. Applicants should have received a Ph.D. or equivalent degree in mathematics no earlier than Jan. 1, 2002 and no later than August 25, 2003. Summer School teaching may be available during the summers of 2004 and 2005 to supplement regular stipend. Salary competitive. Consideration of applications will begin December 1, 2002 and continue until available positions are filled. Send letter of application, current curriculum vitae, minimum 4 letters of recommendation, one of which should address teaching ability, and description of research to **Naresh Jain, Head, School of Mathematics, University of Minnesota, 206 Church Street S.E., 127 Vincent Hall, Minneapolis, MN 55455**. The University of Minnesota is an equal opportunity educator and employer. See also <http://www.math.umn.edu>.

UNIVERSITY OF MINNESOTA, MINNEAPOLIS - SCHOOL OF MATHEMATICS - Tenured Or Tenure Track Positions Starting Fall Semester, 2003 - The School of Mathematics may have available several tenure-track Assistant Professor or tenured Associate or Full Professor positions starting fall semester, 2003. Ph.D. or equivalent degree in mathematics or closely related field by the beginning date of appointment, outstanding research and teaching abilities are required. Applications at all levels are invited; preference will be given to applicants whose research interests are compatible with those of the School. Consideration of applications will begin November 1, 2002 and will continue until available positions are filled. Send letter of application, current curriculum vitae, at least 4 letters of recommendation, one of which should address teaching ability, and description of research to: **Naresh Jain, Head, School of Mathematics, University of Minnesota, 127 Vincent Hall, 206 Church Street S.E., Minneapolis, MN 55455**. The University of Minnesota is an equal opportunity educator and employer.

UNIVERSITY OF MINNESOTA, MINNEAPOLIS - SCHOOL OF MATHEMATICS - Several temporary or visiting positions at all levels (Instructor, Assistant, Associate or Full Professor) may be available for terms ranging from one semester to two years beginning fall semester, 2003. Ph.D. or equivalent degree in mathematics or closely related field by beginning date of appointment, strong research and teaching abilities are required. Preference will be given to applicants whose research interests are compatible with those of the School. Salary competitive. Consideration of applications will begin December 1, 2002 and continue until available positions are filled. Send letter of application, current curriculum vitae, at least 4 letters of recommendation, one of which should address teaching ability, and description of research to **Naresh Jain, Head, School of Mathematics, University of Minnesota, 206 Church Street S.E., 127 Vincent Hall, Minneapolis, MN 55455**. The University of Minnesota is an equal opportunity educator and employer. See also <http://www.math.umn.edu>.

UNIVERSITY OF NOTRE DAME - DEPARTMENT OF MATHEMATICS - Regular Position in Stochastic Analysis - invites applications for a position in the field of Applied Stochastic Analysis to start on August 24, 2003. The position is at the tenure track level, but a tenured appointment may be possible for an exceptional candidate. The teaching load is one course one semester and two courses the other semester. The salary is competitive. Applications, including a curriculum vitae, a letter of application, and a completed AMS standard cover sheet, should be sent to: **Steven A. Buechler, Chair, Department of Mathematics, University of Notre Dame, Notre Dame, IN 46556**. Applicants should also arrange for at least three letters of recommendation to be sent to the chair. These letters should address the applicant's research accomplishments and supply evidence that the applicant has the ability to communicate articulately and teach effectively. Notre Dame is an equal opportunity employer. Women and minorities are urged to apply. The evaluation of candidates will begin December 1, 2002. Information about the department is available at <http://www.math.nd.edu/math>

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UNIVERSITY OF OREGON - DEPARTMENT OF MATHEMATICS - Applications are invited for one tenure-track Assistant or Associate Professor in the Dept. of Mathematics, beginning Sept. 2003. Qualifications are a Ph.D. in the mathematical sciences, an excellent record of research accomplishment, and evidence of teaching ability. Applicants from all parts of the mathematical sciences are encouraged to apply. See <http://darkwing.uoregon.edu/~math/employment.html>. Competitive salary with excellent fringe benefits. Mail complete vita and at least three letters of recommendation to **Search Committee, 1222 Dept. of Mathematics, University of Oregon, Eugene, OR 97403-1222, Attention: J. Perkins**. Application materials may NOT be submitted electronically. Closing date is January 6, 2003. Women and minorities are encouraged to apply. The University of Oregon is an EO/AA/ADA Institution committed to diversity.

UNIVERSITY OF OREGON - DEPARTMENT OF MATHEMATICS - Applications are invited for one tenure-track Assistant or Associate Professor in the Dept. of Mathematics in the areas of numerical analysis and/or applied analysis, beginning Sept. 2003. Qualifications are a Ph.D. in the mathematical sciences, an excellent record of research accomplishment in the required fields, and evidence of teaching ability. See <http://darkwing.uoregon.edu/~math/employment.html>. Competitive salary with excellent fringe benefits. Mail complete vita & at least three letters of recommendation to: **Professor Yuan Xu, Chair of Applied Analysis Search Committee, 1222 Dept. of Mathematics, University of Oregon, Eugene, OR 97403-1222**. Application materials may NOT be submitted electronically. Closing date is January 6, 2003. Women and minorities are encouraged to apply. The University of Oregon is an EO/AA/ADA Institution committed to diversity.

UNIVERSITY OF OREGON - DEPARTMENT OF MATHEMATICS - The Department of Mathematics at the University of Oregon announces a tenure-track position in Mathematics Education at the assistant or associate professor level, Starting Fall 2003. Qualifications: either a Ph.D. in mathematics and documented interest in Mathematics Education at the elementary or secondary level; or a Ph.D. or Ed.D. in Mathematics Education with a very strong background and interest in mathematics. In addition the candidate must have some involvement in the education of future school teachers, and excellence in teaching undergraduate mathematics. See <http://darkwing.uoregon.edu/~math/employment.html>. Please send your application materials, including full C.V. and at least three letters of recommendation from people well acquainted with your qualifications, to: **Professor J. Brundan, Mathematics Education Hiring Committee, Department of Mathematics, 1222 University of Oregon, Eugene, OR 97403-1222**. Application materials may NOT be submitted electronically. Closing date for applications is January 13, 2003. Women and minorities are encouraged to apply. The University of Oregon is an EO/AA/ADA Institution committed to diversity.

UNIVERSITY OF PENNSYLVANIA - DEPARTMENT OF MATHEMATICS - We anticipate that commencing July 1, 2003, there may be one or more tenure positions available in the following areas (in alphabetical order): algebra, analysis, applied mathematics, discrete mathematics and geometry/topology. These positions are for candidates with outstanding, internationally recognized research achievements who are successful teachers of undergraduate and graduate students. Rank and salary will depend upon experience. Write to the **Personnel Committee, Department of Mathematics, University of Pennsylvania, Philadelphia, PA 19104-6395**. The University of Pennsylvania is an equal opportunity, affirmative action employer.

UNIVERSITY OF PENNSYLVANIA - DEPARTMENT OF MATHEMATICS - Several positions (including a possible tenure-track position) will be available beginning July 1, 2003. Candidates should have strong research credentials and be recognized as potentially successful teachers of undergraduate and graduate students. Send resume and three letters of reference to the **Personnel Committee, Department of Mathematics, University of Pennsylvania, Philadelphia, PA 19104-6395**. These are due by January 1, 2003. The University of Pennsylvania is an equal opportunity, affirmative action employer.

UNIVERSITY OF WATERLOO - DEPARTMENT OF COMBINATORICS AND OPTIMIZATION - The Department of Combinatorics and Optimization at the University of Waterloo invites applications for one or more tenure-track faculty positions, in any of the Department's research areas: algebraic combinatorics, combinatorial optimization, continuous optimization, cryptography, graph theory, and quantum computing. While the intention is to make appointments at the rank of Assistant Professor, applications for more senior positions will be considered. Outstanding junior candidates will be considered for a Tier 2 Canada Research Chair. A Ph.D. and significant evidence of excellence in research and the potential for effective teaching are required. Responsibilities will include the supervision of graduate students, as well as teaching at the undergraduate and graduate levels. Salary will depend on the candidate's qualifications. Effective date of appointment: July 1, 2003. These appointments are subject to the availability of funds. Canadians and permanent residents will be considered first for these positions. The University of Waterloo encourages applications from all qualified individuals, including women, members of visible minorities, native peoples, and persons with disabilities. Interested individuals should send curriculum vitae, selected reprints/preprints and the names of three references to: **Prof. W.H. Cunningham, Chair, Department of Combinatorics and Optimization, Faculty of Mathematics, University of Waterloo, Waterloo, Ontario, Canada N2L 3G1**. E-mail: combopt@math.uwaterloo.ca. Phone: (519) 888-4567 x3482. Fax: (519) 725-5441. Web: http://www.math.uwaterloo.ca/CandO_Dept/index.shtml. Closing date for receipt of applications is December 10, 2002.

UNIVERSITY OF WATERLOO - DEPARTMENT OF COMBINATORICS AND OPTIMIZATION - The Department of Combinatorics and Optimization at the University of Waterloo invites applications for a tenure-track faculty position in the area of continuous optimization. While the intention is to make an appointment at the rank of Assistant Professor, applications for more senior positions will be considered. Outstanding junior candidates will be considered for a Tier 2 Canada Research Chair. A Ph.D. and significant evidence of excellence in research and the potential for effective teaching are required. Responsibilities will include the supervision of graduate students, as well as teaching at the undergraduate and graduate levels. Salary will depend on the candidate's qualifications. Effective date of appointment: July 1, 2003. This appointment is subject to the availability of funds. Canadians and permanent residents will be considered first for this position. The University of Waterloo encourages applications from all qualified individuals, including women, members of visible minorities, native peoples, and persons with disabilities. Interested individuals should send curriculum vitae, selected reprints/preprints and the names of three references to: **Prof. W.H. Cunningham, Chair, Department of Combinatorics and Optimization, Faculty of Mathematics, University of Waterloo, Waterloo, Ontario, Canada N2L 3G1**. E-mail: combopt@math.uwaterloo.ca. Phone: (519) 888-4567 x3482. Fax: (519) 725-5441. Web: http://www.math.uwaterloo.ca/CandO_Dept/index.shtml. Closing date for receipt of applications is December 10, 2002.

UNIVERSITY OF WATERLOO - DEPARTMENT OF PURE MATHEMATICS - Tenure-Track Position - The Department of Pure Mathematics at the University of Waterloo invites applications for an anticipated tenure-track position starting July 1, 2003. The Department is interested in candidates with research interests in algebra, number theory, geometry or topology. In order to be considered a candidate must either have a Ph.D. or expect to complete the degree prior to the beginning of the appointment. Postdoctoral experience is preferred but not required. An appointment will be offered only to someone with very strong research and teaching qualifications. The closing date for receipt for applications is November 15, 2002. Applicants should submit their curriculum vitae, together [→]

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[←] with the names of at least three referees, and should arrange for letters of reference to be sent directly from the referees. In accordance with Canadian immigration requirements, Canadian citizens and permanent residents will be given first consideration for this position. The University of Waterloo encourages applications from all qualified individuals, including women, members of visible minorities, native people, and persons with disabilities. This appointment is subject to the availability of funds. Please send applications to: **Dr. B. Forrest, Chair Department of Pure Mathematics University of Waterloo, Waterloo, Ontario, Canada N2L 3G1.** The department's Web page is at http://math.uwaterloo.ca/PM_Dept/.

UNIVERSITY OF WATERLOO - DEPARTMENT OF PURE MATHEMATICS - Tenure-Track Position - The Department of Pure Mathematics at the University of Waterloo invites applications for one or more anticipated tenure-track position starting July 1, 2003. The Department is seeking candidates with research interests in any area of Pure Mathematics. In order to be considered a candidate must either have a Ph.D. or expect to complete the degree prior to the beginning of the appointment. Postdoctoral experience is preferred but not required. An appointment will be offered only to someone with very strong research and teaching qualifications. The closing date for receipt for applications is November 15, 2002. Applicants should submit their curriculum vitae, together with the names of at least three referees, and should arrange for letters of reference to be sent directly from the referees. In accordance with Canadian immigration requirements, Canadian citizens and permanent residents will be given first consideration for this position. The University of Waterloo encourages applications from all qualified individuals, including women, members of visible minorities, native people, and persons with disabilities. This appointment is subject to the availability of funds. Please send applications to: **Dr. B. Forrest, Chair, Department of Pure Mathematics, University of Waterloo, Waterloo, Ontario, Canada N2L 3G1.** The department's Web page is at http://math.uwaterloo.ca/PM_Dept/.

UNIVERSITY OF WISCONSIN, MADISON - DEPARTMENT OF MATHEMATICS AND PHYSICS - Mathematical Physics/String Theory Cluster Hiring - The Departments of Mathematics and Physics anticipate openings for one or two positions to begin August 25, 2003 at either the tenure track (assistant professor) or tenured (associate/full professor) level. This cluster hiring is a part of the Madison Initiative and is intended to establish a prominent research group connecting the existing groups in particle physics phenomenology in the Physics Department and topology/geometry in the Mathematics Department. Applications are especially encouraged from theorists pursuing innovative research in string theory, quantum gravity, physics with extra dimensions, quantum field theory, supersymmetry, and unification theories; as well as from mathematicians working on aspects of string theory or related topics. Successful candidates will be encouraged to participate in interdisciplinary research, which will strengthen ties between the two departments. Joint appointments in the Mathematics and Physics Departments are contemplated. Candidates should exhibit evidence of outstanding research records, normally including achievements significantly beyond the doctoral dissertation. A strong commitment to excellence in instruction at both undergraduate and graduate levels is also expected. Applicants should send a curriculum vitae which includes a publication list, and brief descriptions of research and teaching accomplishments and goals to: **Math/Physics Cluster Hiring Committee, Dept. of Mathematics, Van Vleck Hall, University of Wisconsin—Madison, 480 Lincoln Drive, Madison, WI 53706-1388.** Applicants should also arrange to send to the above address, three letters of recommendation, which should address the applicant's research potential and teaching experiences. Review of applications will begin on November 1, 2002. Applications will be accepted until the positions are filled. Additional letters will be solicited by the hiring committee for senior appointments. The Departments of Mathematics and Physics are committed to increasing the number of women and minority faculty. The University of Wisconsin is an Affirmative Action, Equal Opportunity Employer and encourages applications from women and minorities. Unless confidentiality is requested in writing, information regarding the applicants must be released upon request. Finalists cannot be guaranteed confidentiality. Additional departmental information is available on the websites <http://www.math.wisc.edu>, <http://www.physics.wisc.edu>. Information about the cluster hiring initiative is available at <http://wiscinfo.doit.wisc.edu/cluster/>.

WILLIAMS COLLEGE - DEPARTMENT OF MATHEMATICS AND STATISTICS - The Williams College Department of Mathematics and Statistics invites applications for one position in statistics, beginning fall 2003, at the rank of assistant professor (in an exceptional case, a more advanced appointment may be considered). We are seeking a highly qualified candidate who has demonstrated excellence in teaching and research, and who will have a Ph.D. by the time of appointment. Williams College is a private, residential, highly selective liberal arts college with an undergraduate enrollment of approximately 2,000 students. The teaching load is two courses per 12-week semester and a winter term course every other January. In addition to excellence in teaching, an active and successful research program is expected. To apply, please send a vita and have three letters of recommendation on teaching and research sent to the **Hiring Committee, Department of Mathematics and Statistics, Williams College, Williamstown, MA 01267.** Teaching and research statements are also welcome. Evaluations of applications will begin on or after November 25 and will continue until the positions are filled. Williams College is dedicated to providing a welcoming intellectual environment for all of its faculty, staff and students; as an EEO/AA employer, Williams especially encourages applications from women and underrepresented minorities. For more information on the Department of Mathematics and Statistics, visit <http://www.williams.edu/Mathematics>.

WILLIAMS COLLEGE - DEPARTMENT OF MATHEMATICS AND STATISTICS - The Williams College Department of Mathematics and Statistics invites applications for two positions in mathematics and one position in statistics, beginning fall 2003, all at the rank of assistant professor (in exceptional cases, more advanced appointments may be considered). We are seeking highly qualified candidates who have demonstrated excellence in teaching and research, and who will have a Ph.D. by the time of appointment. Williams College is a private, residential, highly selective liberal arts college with an undergraduate enrollment of approximately 2,000 students. The teaching load is two courses per 12-week semester and a winter term course every other January. In addition to excellence in teaching, an active and successful research program is expected. To apply, please send a vita and have three letters of recommendation on teaching and research sent to the **Hiring Committee, Department of Mathematics and Statistics, Williams College, Williamstown, MA 01267.** Teaching and research statements are also welcome. Evaluations of applications will begin on or after November 25 and will continue until the positions are filled. Williams College is dedicated to providing a welcoming intellectual environment for all of its faculty, staff, and students; as an EEO/AA employer, Williams especially encourages applications from women and underrepresented minorities. For more information on the Department of Mathematics and Statistics, visit <http://www.williams.edu/Mathematics>.

YALE UNIVERSITY - DEPARTMENT OF MATHEMATICS - Yale University applications accepted for Gibbs Instructorships/Assistant Professorships for Ph.D. with outstanding promise in research in pure Mathematics. Appointments are for two/three years, starting July 2003. The teaching load for Gibbs Instructors/Assistant Professors will be kept light, so as to allow ample time for research. This will consist of three one-semester courses per year. Part of the duties may consist of a one-semester course at the graduate level in the general area of the instructor's research. Applications and supporting materials must be received by January 1, 2003. Offers will be made during February. Salary at least \$51,800. Applications are available at: <http://www.math.yale.edu>. Applications and supporting materials may be sent via U.S. mail to: **The Gibbs Committee, Department of Mathematics, Yale University, P.O. Box 208283, New Haven, CT 06520-8283** or via email to: gibbs.committee@math.yale.edu. Applications from women and members of minority groups are welcome. Yale is an AffirmativeAction/Equal OpportunityEmployer.

Association for Women in Mathematics

2002/2003 MEMBERSHIP FORM

LAST NAME _____ FIRST NAME _____ M.I. _____

ADDRESS _____

AWM's membership year is from October 1st to September 30th. Please fill-in this information and return it along with your DUES to:

AWM Membership
 4114 Computer & Space Sciences Building
 University of Maryland
 College Park, MD 20742-2461

The AWM Newsletter is published six times a year and is part of your membership. Any questions, contact AWM at awm@math.umd.edu; (301) 405-7892 or refer to our website at: <http://www.awm-math.org>

I **DO NOT** wish for my AWM membership information to be released for the **Combined Membership List**.

Email: _____ Home Phone: _____ Work Phone: _____
 do not publish home number do not publish work number

Date of Birth (optional): _____ (MMDDYYYY) [the date of birth field is to strictly help prevent duplicate entries]

PROFESSIONAL INFORMATION:

Position: _____ If **student, GRADUATE or UNDERGRADUATE** (circle one)

Institution/Company: _____ If **not employed, leave position & institution blank**

City, State, Zip: _____

DEGREES EARNED:

	Degree(s)	Institution(s)	Year(s)
Doctorate:			
Master's:			
Bachelor's:			

SO_02

INDIVIDUAL DUES SCHEDULE

Please check the appropriate membership category below. Make checks or money order payable to: **Association for Women in Mathematics**.
 NOTE: All checks must be drawn on U.S. Banks and be in U.S. Funds. AWM Membership year is **October 1st to September 30th**.

REGULAR INDIVIDUAL MEMBERSHIP.....	\$ 50	
2ND FAMILY MEMBERSHIP..... (NO newsletter) Please indicate regular family member: _____	\$ 30	
CONTRIBUTING MEMBERSHIP.....	\$100	
RETIRED or PART-TIME EMPLOYED MEMBERSHIP (circle one).....	\$ 25	
STUDENT or UNEMPLOYED MEMBERSHIP (circle one).....	\$ 15	
ALL FOREIGN MEMBERSHIPS (INCLUDING CANADA & MEXICO).... FOR ADDITIONAL POSTAGE ADD	\$ 8	
All payments must be in U.S. Funds using cash, U.S. Postal orders, or checks drawn on U.S. Banks.		
BENEFACTOR [\$2,500] or FRIEND [\$1,000] (circle one).....	\$	
<input type="checkbox"/> I am enclosing a DONATION to the "AWM GENERAL FUND".....	\$	
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Indicate if you wish for your contribution(s)/donation(s) to remain ANONYMOUS ⇔ <input type="checkbox"/>		
Dues in excess of \$15 and all cash contributions/donations are deductible from federal taxable income.		

INSTITUTIONAL DUES SCHEDULE

<input type="checkbox"/> CATEGORY 1 (includes 10 student memberships; 1 free ad; 25% off additional Newsletter & online ads*)..	\$250	
<input type="checkbox"/> CATEGORY 2A (includes 3 student memberships; 1 free ad; 10% off additional Newsletter & online ads*)....	\$125	
<input type="checkbox"/> CATEGORY 2B (includes 6 student memberships; 10% off Newsletter & online ads*).....	\$125	

ADVERTISING: Institutional members on Categories 1 and 2a receive ONE FREE job link ad **or** ONE FREE Newsletter ad (up to 4 lines) for the membership year Oct. 1st to Sept. 30th. All institutional members receive discounts on other eligible* advertisements (25% off for Category 1 and 10% off for Categories 2a and 2b). *Eligible advertisements: The institutional discount applies to both classified and job link online ads as well as classified *Newsletter* ads, but it **does not** apply to *Newsletter* display ads. If institutional dues **have not been received** by the invoice date, the **full advertising rate** will be charged. *Newsletter* advertising deadlines are the 1st of every **EVEN** month. All institutions advertising are Affirmative Action/Equal Opportunity Employers. **STUDENT NOMINEES:** Institutions have the option to nominate students to receive the newsletter as part of their membership. List names and addresses of student nominees on opposite side or attach a separate page. [ADD \$15 (\$23 for foreign members) to the listed institutional rate for **each** student add-on over the initial 10 students for Category 1; over the initial 3 students for Category 2a & over the initial 6 students for Category 2b]. For more advertising/membership info see www.awm-math.org

Indicate if **GIFT membership FROM:** _____ **TOTAL ENCLOSED \$** _____

ADDRESS CORRECTION FORM

- Please change my address to:
 Please send membership information to my colleague listed below:
 No forwarding address known for the individual listed below (enclose copy of label):

(Please Print)

Name _____

Address _____

City _____ State _____ Zip _____ - _____

Country (if applicable) _____ E-mail Address _____

Position _____ Institution/Org. _____

Telephone: Home _____ Work _____

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MAIL TO:

Database Corrections
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 of Maryland, College Park
 Maryland 20742-2461

or E-MAIL:

awm@math.umd.edu

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