

AWM

ASSOCIATION FOR WOMEN IN MATHEMATICS

Volume 33, Number 5

NEWSLETTER

September–October 2003

PRESIDENT'S REPORT

As the new academic year begins, the AWM is primed to launch its program of AWM Student Chapters. I encourage all of you at academic institutions to start a chapter. The initiative may come from a faculty member or a student, undergraduate or graduate. You'll find information on how to start a chapter on the AWM website. If you have an existing mathematics club, you may want to affiliate with the AWM. The primary goal of the Student Chapter program is to mentor and encourage women considering possible careers in the mathematical sciences. I look forward to announcing the formation of your chapter in this column.

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In the July–August *Newsletter*, we announced two special AWM programs this year: a leadership workshop entitled “After Tenure: Women Mathematicians Taking a Leadership Role” to be held March 12–14 at the University of Maryland and a one-year program of Collaborative Research Grants. The deadlines for both programs are coming soon: October 10 for the Collaborative Research grants and November 20 for the leadership workshop. (Additional selections will be made for both programs at a later date if funds remain. See the announcements on pages 17 and 18 or on the AWM website for details.) Both of these programs are dedicated to the memory of Ruth Michler and will be supported by the NSF and the University of North Texas through funds from Ruth Michler's NSF POWRE grant.

We are delighted to announce that the Office of Naval Research has renewed for another three years its support for the AWM Workshops for Graduate Students and Recent Ph.D.'s, held at the annual Joint Mathematics Meetings and SIAM meetings. The AWM thanks the ONR for its ongoing support of this program that has provided mentoring and encouragement, as well as an opportunity to present their research, to so many women at the start of their careers.

The Exxon-Mobil Foundation has given an unrestricted gift to the AWM for the sixteenth consecutive year. We are deeply grateful to Exxon-Mobil for its continued support of our mission.

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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The AWM Nominating Committee, chaired by Jean Taylor, has come up with a wonderful slate of candidates for election including Barbara Keyfitz for President, Rebecca Herb for Treasurer and Krystyna Kuperberg, Maxine Rockoff, Elaine Terry, and Ann Trenk for the two positions of Member-at-Large on the Executive Committee. Biographies and statements will appear shortly on the AWM website and in the November–December *Newsletter*. You will be able to vote either by downloading the ballot from the website or by tearing out the ballot in the next *Newsletter*. I encourage all of you to vote.

In addition to the deadlines already noted above, please note that the deadline is **October 1** for the following: applications for travel grants (see page 19), nominations for the Alice T. Schafer Prize for Excellence by an undergraduate woman (see page 6), and nominations for the Louise Hay Award for Contributions to Mathematics Education (see page 15).

The AWM office will be moving to another location on the University of Maryland, College Park campus. The move is currently scheduled for early- to mid-October. Our current address of 4114 Computer and Space Sciences Building should be used for all correspondence until further notice. We will maintain a mailbox at that address for several months after our move. We'll keep you posted. Our email address and telephone numbers will remain the same (awm@math.umd.edu; 301-405-7892). A new fax number will be announced at a later date.

On my visits to the University of Maryland, I have enjoyed learning about their exciting program S.T.A.N.D., which addresses the need to increase the participation of underrepresented groups in the computer, earth, mathematical and physical sciences. You can learn more about this far-reaching and innovative program at www.cmps.umd.edu/undergraduate/stand.htm. I recently had the pleasure of addressing the Math SPIRAL students. SPIRAL (Summer Program in Research and Learning), a part of the umbrella S.T.A.N.D. program, is a six-week summer program for sophomores and juniors. Seeing the enthusiasm of the students and hearing about their plans for graduate school was inspiring and encouraging.

We are pleased to welcome University of Maryland student Jasmine Milner as a part-time office assistant.

I would like to thank recent Dartmouth graduate Heidi Williams for volunteering her time and ideas to the AWM this past summer. We wish her much success as she begins her graduate study with a Rhodes Fellowship.

On a recent vacation in Spain, I was delighted to see highlighted in a small museum in Sevilla a portrait of Lubna, a 10th century woman

mathematician. The caption read: "... Her mastery of calculus, arithmetic and metric earned her grand intellectual prestige."

Wishing all of you a wonderful beginning to the new academic year,

Carolyn Gordon

Carolyn Gordon
Dartmouth College
July 25, 2003



AWM SLATE CHANGE!

The slate announced in the July–August issue was incorrect. The nominees are: Barbara Keyfitz for President, Rebecca Herb for Treasurer and Krystyna Kuperberg, Maxine Rockoff, Elaine Terry, and Ann Trenk for Member-at-Large (two to be elected) of the Executive Committee.

Remember to vote, using the ballot either in the November–December issue or from the website.

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 US branch), US money order, or international postal order. Cash payment will be accepted if necessary, but only in US 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 Marge Bayer, Math Dept., University of Kansas, 405 Snow Hall, 1460 Jayhawk Boulevard, Lawrence, KS 66045-7523; email: bayer@math.ukans.edu; fax: 785-864-5255 and all **education column** material to Ginger Warfield, Math Department, 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.

AWM ONLINE

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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>

AWM-Net Editor

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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

Alice T. Schafer Prize: October 1, 2003

Louise Hay Award: October 1, 2003

NSF-AWM Travel Grant: October 1, 2003
and February 1, 2004

Michler Collaborative Research Grants:
October 10, 2003

Noether Lecturer Nomination:
October 15, 2003

Essay Contest: October 31, 2003

Leadership Conference:
November 20, 2003

AWM Workshop, July 2004:
January 26, 2004

NSF-AWM Mentoring Travel Grant:
February 1, 2004

Sonia Kovalevsky High School
Mathematics Days: February 4, 2004

AWM CONTACT INFO

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AMS ELECTION

All persons standing for election for contested office in the American Mathematical Society (AMS) were asked to submit statements for this issue of the *Newsletter*. Any statements received late will appear in the November–December issue. The 2003 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).

Vaughan F. R. Jones and Nolan R. Wallach were nominated for Vice-President, one to be elected for a term of three years. Lenore Blum and Linda Keen were nominated for Trustee, one to be elected for a term of five years. The candidates for Member-at-Large of the Council are: James W. Cannon, Sylvain E. Cappell, Beverly E. J. Diamond, Weinan E, Mark Goresky, Jacque Hurtubise, Kevin P. Knudson, Michael T. Lacey, Fred Stephen Roberts, and Alejandro Uribe. Five will be elected to serve terms of three years. Candidates for the Nominating Committee are: Annalisa Crannell, Dennis DeTurck, Arthur M. Jaffe, Robion C. Kirby, Thomas Kurtz, and Joel H. Spencer. Three will be elected for terms of three years. David L. Colton, Emma Previato, Daniel Ruberman and Karl Rubin have been nominated for the Editorial Boards Committee; two will be elected for terms of three years.

VICE-PRESIDENT

**Vaughan F. R. Jones, Professor of Mathematics,
University of California, Berkeley**

I view mathematics as part of a continuous spectrum of science. Mathematics is important both in its own right and as a tool for the sciences. In Chemistry and Physics the role of mathematics is familiar to all. In biology its importance is increasing as the revealing of the genetic code in all its complexity creates a demand for a new branch of combinatorics and new algorithms to handle huge data sets. I see it as important that the AMS should, as well as looking after its members' interests in mathematics for its own sake and mathematics education, make all efforts to strengthen connections with the rest of science. This is not always easy as questions as simple as vocabulary can create a huge gulf and a perception by the rest of the scientific community that mathematicians do not want to take time to think about anything other than mathematics.

K. Renee Fister, AWM Clerk

TRUSTEE

Lenore Blum, Distinguished Career Professor of Computer Science, Carnegie Mellon University

The ongoing and future health of the mathematics community and the AMS, in particular, depends on the many multifaceted and diverse contributions and vision of its members—in research, education, communication, leadership and public understanding. Throughout my own professional career, I have worked to create innovative and exciting ways to encourage broad appreciation of, and involvement in, mathematics.

As AWM president, I helped to create programs to increase women's participation in mathematics and served on panels on mathematics in government, business and industry. During my term as AMS vice president, I worked to open communication with the African mathematics community. As deputy director of MSRI I helped to establish the Human Resources Advisory Committee (HRAC) and the Conversations between mathematics researchers and mathematics teachers. My other outreach efforts to the public-at-large and to the wider science community include my involvement in MSRI's Fermat Fest and (while Chair of the AAAS Mathematics Section) my work as organizer of the AAAS sessions on the Reasonable Effectiveness of Mathematics.

I would bring this experience and perspective, along with considerable enthusiasm for the enterprise, to the role of Trustee.

Linda Keen, Professor of Mathematics, Herbert H. Lehman College (CUNY)

The AMS is a multifaceted organization whose primary mission is to foster good mathematics. It does this primarily as a publisher and as a sponsor for meetings and conferences. Another very important responsibility is to deal with the recognition of mathematics as a profession by giving prizes, and by reaching outside the profession to get support. Finally, the AMS has a responsibility for encouraging all those who want to do mathematics to take part. This includes presenting ourselves and our work to the broadest possible audience.

I've been involved with both the AWM and AMS over many years: as AWM President, and member of many AWM committees, as AMS Council member,

AMS Vice President, as a member of AMS committees such as that on professional ethics, and as an editor of two AMS journals. In my various roles at AMS, I have worked hard to make the AMS effective on all fronts. As a Trustee, I have had the responsibility for making decisions on all matters with financial implications. The Society's finances reflect the complexity of its responsibilities, and in each year of my term, I have learned about new parts of that structure. As a second term Trustee, I will bring this knowledge and perspective to guide me in helping set policy that best supports both our people and our work as researchers and educators.

MEMBER-AT-LARGE OF COUNCIL

Jim Cannon, Professor of Mathematics, Brigham Young University

Please bend my ear: I will listen. I love the mathematical enterprise. I want people of all sorts, nationalities, sizes, genders, and persuasions to know about it, appreciate it, and participate in it.

Sylvain Cappell, Professor of Mathematics, New York University – Courant Institute

My experiences have familiarized me with some of the concerns of AMS members and I hope that could help me if I serve as Member at Large. During my student years, I worked in both government and industrial labs. I have since been working in academic institutions where my experience includes chairing (now and for many years) Courant Institute's Math Appointments and Promotions Committee, chairing (now and for many years) my university's Research Challenge Fund Committee (awarding research support in all areas), chairing or serving on many math department external review committees at public and private institutions and serving on public and private foundation review committees in the US and abroad. I have long been coordinating the mathematics outreach efforts and faculty development workshops of the Faculty Resource Network (linked to the National Leadership Alliance) and have long been actively involved in mentoring in and aiding precollege math education programs in New York area schools. I have served on or chaired four AMS national committees.

**Beverly Diamond, Professor of Mathematics,
College of Charleston**

The AMS has the broad mandate of furthering the interests of mathematical research and scholarship. Over the last two decades, the organization has met that mandate in two ways. It has continued to contribute in traditional ways with its very successful meetings and publication programs. At the same time, it has met the challenge of communicating and integrating with several other communities.

With an uncertain economy in our immediate future, issues of policy and priorities, both internal and external, will arise. I would enjoy having an opportunity to contribute to that discussion and to the ongoing work of the AMS.

**Mark Goresky, School of Mathematics,
Institute for Advanced Study**

The ability of an individual council member to influence the direction of the AMS is somewhat less than epsilon. And there are so many things the AMS does really well. The computerization of *Math Reviews*, for example, has changed the way we search the literature. The AMS is one of the few reliable and affordable mathematics publishers left in the world. The program of AMS regional meetings is excellent. If elected, I will use whatever little influence I might have to see that the AMS continues to support and encourage high quality basic research in Mathematics, perhaps by reducing the

cost of some of its pricier books, by maintaining the quality of its journals and their editorial boards, and by strengthening its ties to other mathematical organizations such as the European Math. Society, SIAM, the MAA, the National Science Foundation, the NSA, and the IEEE.

**Kevin P. Knudson, Assistant Professor of
Mathematics, Mississippi State University**

As mathematicians we have two primary tasks—research and education. The AMS is no different. As government budgets shrink and student enthusiasm wanes it is the Society's mission to remind everyone that mathematics is the queen of the sciences. This includes lobbying funding agencies to support mathematical research and reaching out to young people and their teachers to excite them about our field, to remind them that they loved to count once upon a time.

Getting people in the door is only part of the job, however. The AMS must take steps to retain them by promoting education at the undergraduate and graduate levels and by pushing for expanded job opportunities for young mathematicians. The 1990s were, by and large, a dismal time to be a new Ph.D. in mathematics; many talented individuals left the field. The Society's lobbying efforts should include an emphasis on this problem. A few programs (VIGRE, Centennial Fellowships, etc.) deal with this issue, but more needs to be done to ensure the future health of our discipline.

I am committed to improving the state of American

CALL FOR NOMINATIONS: THE 2005 NOETHER LECTURE

AWM 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, Ol'ga Ladyzhenskaya, Judith Sally, Olga Oleinik, Linda Rothschild, Dusa McDuff, Krystyna Kuperberg, Margaret Wright, Sun-Yung Alice Chang, Lenore Blum, and Jean Taylor.

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, 2003** 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.

mathematics. I would be honored to pursue this end as a Member at Large of the Council.

**Michael Lacey, Professor of Mathematics,
Georgia Tech**

My professional life is devoted to creating beautiful mathematics, and helping others to be able to do the same. As proud as I am of some of my research accomplishments, I am equally proud of my efforts to help others, assistant profs, postdocs, grad students, and undergraduates, improve their intellectual abilities. I have been the undergraduate advisor, have oversight of the Georgia Tech VIGRE program, and have served as mentor to many students including several women and minority students and postdocs.

Serving on the AMS Council would be an honor, and present me with an opportunity to add to these contributions I have already made to the profession.

**Alejandro Uribe, Professor of Mathematics,
University of Michigan**

I consider excellence in research (both pure and interdisciplinary) and in education to be the fundamental goals of our profession. In these uncertain times it is especially important to work to maintain these goals sharply in focus, both within academia and in our society

at large. I would work in the direction of these goals, if elected, especially in supporting the research of young mathematicians, promoting the development of sound pedagogical tools, and fighting against the “math phobia” so pervasive outside mathematics departments.

NOMINATING COMMITTEE:

**Annalisa Crannell, Associate Professor of
Mathematics, Franklin & Marshall College**

The Nominating Committee has the task of proposing candidates for election to various offices of the Society. This means of course that the Nominating Committee should have a good knowledge of the membership and of potential candidates. It also means that the Nominating Committee should pay careful attention to balance and diversity—not merely in the sociological sense of “diversity” (although certainly that, too), but also to diversity among academic institutions, geography, academic rank, and previous service to the AMS. For example, experienced officers provide a sense of history that keep committees from duplicating failed efforts; recruiting newer officers with a fresh perspective avoids the “usual suspects” problem and keeps the AMS from becoming cliquish. Above all, the Nominating Committee plays an important role in drawing together a pool of people who will continue to support and promote

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. The Schafer Prize was established in 1990 by the Executive Committee and is named for AWM president and one of its founding members, Alice T. Schafer, who has contributed a great deal to women in mathematics throughout her career. 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. She must either be a US citizen or have a school address in the US. The fourteenth annual Schafer Prize will be awarded at the Joint Prize Session at the Joint Mathematics Meetings in Phoenix, Arizona, January 7–10, 2004.

The letters of nomination should include, but are 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. Nominees must be undergraduates as of October 1, 2003. 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, 2003**. If you have questions, phone 301-405-7892, email awm@math.umd.edu or visit www.awm-math.org. Nominations via email or fax will not be accepted.

mathematics and mathematical research.

**Dennis DeTurck, Professor of Mathematics,
University of Pennsylvania**

The Society must maintain its focus on the vitality of the mathematical research enterprise. At the same time, it should encourage the involvement of research mathematicians in K–12 education and work to safeguard the status of the profession and to ensure that it welcomes and nurtures a diverse cohort of new members.

**Arthur M. Jaffe, Professor of Mathematics,
Harvard University**

This has been a banner year for mathematics. Among many advances, we witnessed the discovery of a polynomial-time primality test and learned new ideas about gradient flows that appear to illuminate the Poincaré conjecture. This evidence suggests that we live in a golden age of mathematics. In this environment, the AMS remains a powerful force assisting us to disseminate our results and to communicate both inside and outside our community. The AMS also helps inspire a new generation of students to develop their mathematical

talents. It acts in various ways to help shape the profession and to explain mathematics to a wide audience. The nominating committee provides a link between the past and the future; it provides an opportunity to encourage broad participation and positive change.

**Rob Kirby, Professor of Mathematics,
University of California, Berkeley**

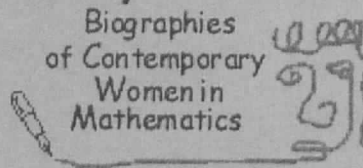
As I write this during the early days of the conflict in Iraq, it is worthwhile to recall that the AMS was founded in 1888 to further the interests of mathematical research and scholarship. The AMS should do this with the participation of all mathematicians, irrespective of race, gender, citizenship, language, or political stance.

**Joel Spencer, Professor of Mathematics,
New York University – Courant Institute**

I am continually impressed by the commitments of time and energy of so many mathematicians in their work for the AMS. We have an enormous pool of talent in our membership. The key function of the Nominating Committee, as I see it, is to find the right person for the right position so that this talent may be best used for the

Essay Contest

Biographies
of Contemporary
Women in
Mathematics



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

The essays will be based primarily on an interview with a woman currently working in a mathematical career. This contest is open to students in the following categories: grades 6–8, grades 9–12, and undergraduate. At least one winning entry will be chosen from each category. Winners will receive a prize, and their essays will be published online at the AWM website. Additionally, a grand prize winner will have his or her entry published in the *AWM Newsletter*. For more information, contact Dr. Victoria Howle (the contest organizer) at vehowle@sandia.gov or see the contest web page: www.awm-math.org/biographies/contest.html. The deadline for receipt of entries is **October 31, 2003**.

betterment of our profession as a whole. We now see a large number of woman mathematicians who have amply demonstrated their leadership abilities as chairs, heads of committees and the like and who would be ideal candidates for high position in the AMS.

EDITORIAL BOARDS COMMITTEE

David L. Colton, Professor of Mathematics, University of Delaware

I am a firm believer in the need for mathematics to have a close connection with applications and have served on the editorial boards of a variety of journals, both pure and applied, over the past twenty years. I would hope to bring this type of expertise to the AMS Editorial Boards Committee. On a different note, I would be interested in working with the AWM on a variety of issues pertaining to the increased participation of women and minorities both in leadership positions in the AMS as well as the broader mathematical community. I have some experience in this direction as past president of the faculty union at the University of Delaware as well as my current position as chief negotiator for the faculty union.

Emma Previato, Professor of Mathematics, Boston University

To the primary committee charge, that of soliciting and submitting nominations for the various editorial committees, I would bring special emphasis in four areas. One, the need and pleasure of rediscovering the classics, republishing early mathematics with expert interpretation in modern language and novel applications. Two, the need to serve members of the Society and the larger community by hearing from them; for example, by instituting a prize for school students to produce an essay on what kind of mathematics books they would read. Three, advancing the Mathematics Digital Project hand in hand with publication, especially to bring mathematics literature to those who may be at a disadvantage, economical or physical. Four, the need to establish links with other disciplines: the face of mathematics is changing rapidly in view of breakthroughs in the sciences. Mathematics publication today is one of the most exciting places to be, and I would be most honored to serve the society in this area.

To the committee's other charge, that of promoting women's participation, I would bring a vast network of personal acquaintances who have excelled in their field.

Daniel Ruberman, Professor of Mathematics, Brandeis University

In an era of increasing journal prices and tightened library budgets, it is imperative that the AMS continue to offer high quality, reasonably priced journals. My experience as an associate editor of the *Bulletin* showed me that the strength of a journal is determined by the discrimination and breadth of its editors, and by their energy in pursuing good papers. As a member of the Editorial Board Committee, I would work to appoint knowledgeable and active mathematicians as editors.

Karl Rubin, Professor of Mathematics, Stanford University

The AMS journals are an important service to the mathematical community, and the primary responsibility for maintaining their quality lies with their editorial boards. A good editor should be conscientious, well-organized, and fair, and must have a broad and deep knowledge of relevant subject areas. In addition, the editorial committees should be representative of the mathematical community.

AWM WORKSHOP IN MONTREAL

At the first Joint Meeting of SIAM and CAIMS in Montreal in June 2003, AWM was pleased to hold its workshop as an integral part of this meeting. Eight recent Ph.D.'s spoke in our minisymposia and five graduate students presented posters. Their names and titles follow this article.

The "Careers Opportunities and Perspectives" minisymposium featured four mathematicians representing a variety of careers and backgrounds. Sue Ann Campbell from the University of Waterloo presented the Canadian

Suzanne Lenhart, AWM Past President

perspective and discussed opportunities available through the MITACS Network of Centres of Excellence and the NSERC fellowship and post-doc program. Both of these programs emphasize linking academia with industrial applications. (See www.mitacs.ca and www.nserc.ca websites.)

Helen Moore of the American Institute of Mathematics Research Conference Center discussed her own unique career path to her current position as Associate Director of the center. She discussed opportunities at all six NSF-supported mathematics institutes and explained the unique features of the conference center in hosting and facilitating small workshops concentrating on solving current significant problems.

Carolyn Cho from Physiome spoke about her career path, starting from living in Newfoundland. Optimizing among your own personal constraints in finding a suitable job was a main point of her talk. She also discussed opportunities for working in interdisciplinary research in mathematics and biology.

Choosing to do research on something relevant was a key decision for Carlos Castillo-Chavez of Cornell University. He has also chosen to involve many students in this research, much of this work through his summer research program for undergraduate minority students. He was one of the co-organizers of the Diversity Day at this meeting, and many of the participants from that special event came to this minisymposium.

The organizers of this workshop, Suzanne Lenhart and Elsa Schaefer, would like to thank the Office for Naval Research and the Air Force Office of Scientific Research for support of our workshop program. We would also like to thank the mentors for this workshop: Sue Ann Campbell, Carolyn Cho, Cammey Cole, Mary Ann Horn, Barbara Keyfitz, and Helen Moore.

Recent Ph.D. and Graduate Student Presenters

Speakers at the AWM Minisymposium on Numerical Methods and Applications of PDEs organized by Suzanne M. Lenhart, University of Tennessee and Oak Ridge National Laboratory were:

Kirsten Boyd, University of Texas at Austin
"Variational Computation of Homogenized Coefficients"

Katharine F. Gurski, National Institute of Standards & Technology

"The Effect of Anisotropic Surface Energy and Contact Angles on the Rayleigh Instability"

Kehinde O. Ladipo, University of Houston and Houston Community College

"Tetrahedral Elements in Finite Element Models with Continuous Pressure Approximation"

Jennifer Ryan, Brown University

"Extension and Applications of Post-Processing for the Discontinuous Galerkin Method"

Speakers at the AWM Minisymposium on Applications in Biology and Fluids, also organized by Suzanne Lenhart, were:

Lyudmyla L. Barannyk, New Jersey Institute of Technology

"Fully Nonlinear Interfacial 3D Waves in a Channel"

Leona Harris Clark, US Environmental Protection Agency

"Applications of a Model for the Hormonal Regulation of the Menstrual Cycle"

Katarzyna A. Rejniak, Ohio State University

"Modeling Development of the Trophoblast Tissue Using the Immersed Boundary Method"

Christina M. Weaver, State University of New York at Stony Brook

"Automated Morphology of Neural Cells"

The AWM women graduate students who presented posters were:

Jyoti Champanerkar, New Jersey Institute of Technology
"Global Hopf Bifurcations and Their Applications"

K.R. Kavanagh, North Carolina State University
"Optimal Design for Groundwater Flow and Remediation Problems"

Heather Lehr, University of Texas at Austin
"Homogenization of a Darcy-Stokes System Modeling Flow in Vuggy Porous Media"

Hoan K. Nguyen, Virginia Polytechnic Institute & State University
"Approximations and Sensitivities for a Class of Delay Differential Equations"

Tetyana M. Segin, New Jersey Institute of Technology
"Nonlinear Long-Wave Stability of Two-Fluid Flow Interface in an Inclined Channel"

FIRST AWM-SIAM SONIA KOVALEVSKY LECTURE

AWM is pleased to announce that Linda Petzold of the University of California was chosen by a selection committee representing both AWM and SIAM to be the first AWM-SIAM Sonia Kovalevsky Lecturer. Beginning in the 1980s with her fundamental contributions to the then-emerging field of differential algebraic equations, Petzold has had a significant impact in numerous areas of applied mathematics and computational science, resulting in two books and over 100 publications. Petzold's record in service is also exceptional, including extensive service to SIAM, most notably in overseeing the transition to electronic publication of SIAM's journals. Linda Petzold is an inspiration to the entire mathematics community, especially to the women mathematics community.

The title of Linda's lecture was "Towards the Multi-scale Simulation of Biochemical Networks." Before she gave the technical talk, she gave a biographical sketch of Sonia Kovalevsky. The abstract for her lecture read:

In microscopic systems formed by living cells, small numbers of reactant molecules can result in dynamical behavior that is discrete and stochastic rather than continuous and deterministic. In simulating and analyzing such behavior it is essential to employ methods that directly take into account the underlying discrete stochastic nature of the molecular events. This leads to an accurate description of the system that in many important cases is impossible to obtain through deterministic continuous modeling (e.g. ODEs). Gillespie's Stochastic Simulation Algorithm (SSA) has been widely used to treat these problems. However as a procedure that simulates every reaction event, it is prohibitively inefficient for most realistic problems.

We report on our progress in developing a multi-scale computational framework for the numerical simulation of chemically reacting systems, where each reaction will be treated at the appropriate scale. The framework is based on a sequence of approximations ranging from SSA at the smallest scale, through a "birth-death" Markov process

approximation, Gillespie's recently-developed tau-leaping approximation, a continuous stochastic differential equation (SDE) approximation, and finally to the familiar reaction rate equations (ODEs) at the coarsest scales.

AWM would like to thank the Department of Energy for their support of the expenses connected with this prize lecture.

MATHFEST 2003

MathFest 2003, the annual summer meeting of the MAA, was held in Boulder, Colorado from July 31 through August 2. Many special programs and workshops were held. For example, prior to MathFest, Project NExT (New Experiences in Teaching, archives.math.utk.edu/projnxt/) held a professional development workshop for the 2002–2003 and 2003–2004 Fellows. The AWM sponsored two events at MathFest, and several hundred of the over 1000 registrants attended each event.

On Friday night, the ever-popular AWM reception was held in the Millennium Hotel. Delicious sweets and other snacks were served, and the pool table was in use the entire time. It was really neat to see professors, such as Sue Geller from Rutgers, there with their undergraduate research students, still flushed with excitement from giving presentations at the meeting.

On Saturday morning, the AWM-MAA invited address was given by Kathy P. Layton. She was the 13th (her favorite number!) recipient of the AWM Louise Hay Award for Contributions to Education (see citation at the AWM website www.awm-math.org). Ms. Layton taught at Beverly Hills High School for forty-one years and has also served the mathematics profession through a long history of contributions and service to organizations such as the MAA, NCTM, and the College Entrance Examination Board. She captivated the audience with her stories of teaching at Beverly Hills High School—telling us about the oil rig on campus and showing a list of famous students. She reflected on how mathematics teaching has changed, by discussing, for

Suzanne Lenhart for the committee

Catherine Roberts, Holy Cross University

example, how technology has transitioned over the decades (from slide rule to scientific calculator to graphing calculator). Her talk was a marvelous capstone to a fun and interesting conference. It was a pleasure to hear her comments about her career as a mathematics teacher. (If you have someone in mind to nominate for the 14th such award, please take the time to do so!)

WOMEN COUNT CONFERENCE

On July 29, 2003 the Women Count Conference was held in Boulder, Colorado, preceding this year's MAA MathFest meeting. This was the second such conference, the first being held at the University of Wisconsin in August, 2001. After the success of the initial conference, organizers decided to plan on hosting this event biennially (preceding the MAA MathFest) if funding could be obtained. Designed to benefit both experienced and prospective directors of mathematical outreach programs for young women, the event is organized by the Women and Mathematics Network under the auspices of the MAA Committee on the Participation of Women. Funding for this year's conference was provided by grants from the National Security Agency and the Tensor Foundation as well as contributions from the AWM and the MathStar/Colorado Department of Education.

The conference began with introductions from the twenty participants who each provided brief descriptions of current programs or programs in the planning stages. This was following by breakout sessions for those interested in high school (or older) age level programs versus middle school (or younger) age programs. The entire group reconvened to share some samples of mathematical activities which had been successfully received in the speaker's outreach program. Tom Hibbs from the Colorado Department of Education discussed an activity on determining the line of best fit, using data about height and age to illustrate the limitations of using small sets of data. Rachel Muir and Rosanna Ramirez from GirlStart in Austin, Texas described a wide array of GirlStart programs and shared Algebra Jeopardy, a game from

their Aiming for Algebra program. Anne Spalding and Jane Arledge from Mesa College discussed the SITHOK summer solar science camp, where a solar car was designed and built by middle school girls. They described the activities, designed as a pilot project for the NEW AIMS Center, through which the girls explored mathematical concepts involved in understanding solar energy. Jerry Dwyer from Texas Tech involved the group in a fun subtraction game based on prime numbers and odd numbers. He also illustrated a spider web activity which taught students how to use polar coordinates.

After eating lunch together, all participants enjoyed the grant proposal writing workshop conducted by Joe Yanik of Emporia State University. This session not only involved a wide variety of useful tips and guidelines for proposal writing but also provided the opportunity for all the participants to do a mock review of a grant proposal.

The day-long conference concluded with a wonderful, relaxing dinner in a nearby Indian restaurant.

The purpose of the conference was to provide a forum for sharing information about sponsoring mathematics outreach programs for young women among both current directors of such programs and those who are interested in creating such programs. One major outcome of this conference was the formation of a support network for prospective directors of outreach programs.

The evaluations for Women Count were extremely positive (an average rating of 4.7 on a scale of 1 to 5). The anonymous participant evaluations were unanimous in favoring future Women Count conferences and recommending this conference to their colleagues.

More information about the Women and Mathematics Network may be found on the web page www.mystery.com/WAM/.

WE NEED AWM STUDENT CHAPTERS!!

Consider starting one.
See www.awm-math.org for details.

Elizabeth Yanik, Emporia State University

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

supported by the Department of Energy, the National Security Agency,
the Office of Naval Research, and the Association for Women in Mathematics

Over the past fifteen 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: An AWM WORKSHOP is scheduled to be held July 12–13, 2004 (*pending final funding approval*) in conjunction with the Society for Industrial and Applied Mathematics (SIAM) 2004 Annual Meeting and the Life Sciences 2004 Conference at the Oregon Convention Center in Portland, Oregon, July 12–16, 2004.

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 research minisymposium will have a definite focus selected from the areas of Mathematical Biology, Modeling, Control, Optimization, Scientific Computing, and PDEs and Applications. AWM will offer funding for travel and two days subsistence for as many as twenty participants. 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. All mathematicians (female and male) are invited to attend the program.

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 their research is required for graduate student applicants and recommended but not required for recent Ph.D.'s. Additional letters of support are encouraged. 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 final 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 website.

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 26, 2004**.
Applications via email or fax will not be accepted.

EDUCATION COLUMN

Sometimes the explanation for an event is that one thing led to another. This column is about a case where two things led to another—and a very good nother it was!

The origins of the situation go back to 1994, when four departments at the University of Washington were awarded a grant from the Pew Charitable Foundation entitled Preparing Future Faculty (PFF). The general idea was to broaden the horizons of graduate students in terms both of the importance of teaching and service and of the existence of good, solid academic mathematical careers at places other than Research I universities. With characteristic generosity, the Pew Foundation, having approved of our goals and general plans, left us a pretty free hand in carrying out those plans. We established a partnership with Seattle Central Community College and Seattle University, a four-year private university, and in consultation with their faculty spent the two years of the grant trying out a number of ideas. The really central one was to have a collection of graduate students visit our partner campuses for a full quarter, each observing one particular faculty member and spending time talking with her or him. Faculty members at our partner institutions were extremely generous with their time, and our graduate students benefited greatly.

Once the two years were over, we were never able to send students in the same numbers, but thanks to support first from the Graduate School and later from a second version of the PFF grant, funded by the NSF and administered by the AMS, we continued to be able to send a few each year for a considerable period. That period ended in spring of '02, when we were left with nary a trickle of funding from any source.

Meanwhile, in another part of the woods, a different development was occurring. Of the original bunch of graduate students who enthusiastically took part in the initial PFF project, a couple were certified movers and shakers. They came back to campus sufficiently inspired to want to delve further into the issues of teaching and learning that their experiences has raised. For several quarters, they organized a reading course. They asked a couple of us on the faculty to join them, which we did

with pleasure, but it was unambiguously their course. Equally unambiguously, it was a success, which provided my colleague, Judith Arms, with exactly the ammunition she needed. She had been studying the issue of graduate needs unmet by our course offerings and had arrived at the conclusion that a major gap was a course on the teaching and learning of mathematics. With that much evidence, she was able to persuade the department to vote such a course into existence, and it has been around (slightly sporadically!) ever since.

And that was the combination that led to this spring's Math 503, in which in lieu of offering graduate students financial support for visiting and observing at other campuses, we offered them credit. Student response was very positive, and Judith and I had a great time co-teaching it, so I shall offer a sketch of a template and (below) a list of the readings and video that seemed to have the most impact, so that anyone whose circumstances are remotely similar can consider trying it.

The key ingredient is connections with mathematics departments on other campuses in the area. In our case, we had begun making connections through the PFF activities, but over time we have established contact with quite a number of other institutions as well. We restricted ourselves to ones in very easy reach (it was a luxury to be able to do that!) and at each one asked if there were faculty members who were willing to be observed and then talk with our students. At every single one at least one, and generally several, faculty members instantly offered to take part. This pleased us so much that we immediately extended the observations planned.

The resulting requirement was as follows: Students observed in pairs (or in one case as a trio). Each pair chose one class for their "major observation," which meant that they observed that particular class once at the beginning of the quarter, once in the middle and once at the end, and had a chat with its instructor each time. In addition (and not necessarily with the same partners) they did a "minor observation" of a single class on some other campus, again with a conversation to go with it.

The class met twice a week for an hour and a half. To offset the time commitment involved in going to another campus and observing and visiting, we cancelled several of the class sessions. Most of the remaining days were

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

spent discussing a series of readings which Judith and I had selected with the aim of having them be provocative but not infuriating. Discussions varied in intensity and in depth, but we did note with pleasure that different readings engaged different students, and for most there was at least one reading that was really intriguing.

As a final project, each was supposed to write up a report on their primary observation. The projects made interesting reading. Perhaps the most interesting were produced by students who cut loose almost entirely from the expected (though expressly not required) format and discussed some aspect of their philosophy of learning or teaching. One, for instance, discussed the importance of trust, and another issues of involvement, interest and relationship in the classroom. On the other hand, others that stayed within the basic expectations produced some very clear-headed and very much to the point observations. One, for instance, wrote: "... enthusiasm is vital to the teaching of mathematics because it becomes a basis for creating an environment conducive to learning, as well as a starting point for engaging the students. The enthusiasm engenders respect, and as I observed ... the respect for the mathematics was a platform for the ideas considered in the course, while the respect for the students was a foundation for the student-instructor relationships." Another reported, with some awe, observing a class where upon being told that they had "bombed" their test the day before, the students responded with questions like "Why do you think that happened?" and

"What suggestions do you have for next time?" And another observed, "She has a very gentle touch at getting the students to realize they made an error without embarrassing them, and to get them to figure out what went wrong."

The students came into the class with different needs and expectations. One who is nearing her doctorate, for instance, wanted to see what life would be like if she were to find a position at a small four year college. Others who are stopping with a master's and were on the brink of looking for work in local community colleges had a far more specific agenda. What they took away was correspondingly also varied, but each seemed to be able to find what he or she needed. And the lone undergraduate, whom we had admitted with some concern that his lack of teaching experience might limit the impact of the class for him, did a beautiful job of applying what he had learned from the readings and discussions as well as the observations to analyze the instructor's teaching and his own learning in the other courses he was concurrently taking.

In all, it wound up being an engaging and enlightening experience for students and faculty members alike. Although some aspects of the course were unique to our own situation, it seems to me that the underlying structure must be possible to reproduce at many other institutions. If I am correct, then my strong message to anyone considering trying it is: "Go for it!"

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. While Louise Hay was widely recognized for her contributions to mathematical logic and for her strong leadership as Head of the Department of Mathematics, Statistics, and Computer Science at the University of Illinois at Chicago, her devotion to students and her lifelong commitment to nurturing the talent of young women and men secure her reputation as a consummate educator. 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, 2003**. 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.

Readings: The second edition of *How to Teach Mathematics* by Stephen Krantz. They read the appendices, generally in contrasting pairs.

They're not Dumb, They're Different: Stalking the Second Tier, by Sheila Tobias

Punished by Rewards: The Trouble with Gold Stars, Incentive Plans, A's, Praise, and Other Bribes, by Alfie Kohn

Teaching and Learning Groups: Dissolution of the Atlas Complex, by Donald Finkel and Stephen Monk

Videotape: "Let us teach guessing," featuring George Pólya. It was filmed in 1966 and is still available through the MAA.

Final comment: if you have any questions, or would like any details, by all means get in touch with me (warfield@math.washington.edu) or Judith (arms@math.washington.edu).

NON-STANDARD CAREERS

We continue our series of articles about women in mathematics whose career has taken some unexpected twists and turns but has wound up satisfying. And we repeat our invitation: if you or someone you know has had such a career and would like to write about it, or to talk on the phone and have somebody else write about it, please get in touch with Ginger Warfield (warfield@math.washington.edu).

This month's subject is Louise Perkins, who volunteered to be a biographee on the basis that her career has had some very interesting swoops and swirls and that she had a message she felt it illustrated. I report it with glee because I agree with both of those points and because it's a great story.

Her tale begins in high school, where she was a cheerleader. Not just any cheerleader—she was into it heart and soul, and even led cheers for the Forty-Niners. Her intellectual life was, to put it mildly, secondary. She nonetheless went on to college (Cal State Hayward), where she got a BA in mathematics. Right after graduation she got married and settled into domesticity and a full-time job. Three months later she was watching a

batch of guys work on repairing something electrical in the house and suddenly announced in words of considerably more than one syllable that they were doing it all wrong, and explained what they needed to be doing. Observing her husband's expression in the thunderstruck silence that followed, she said, "But you knew I was smart!" He replied, "I didn't know you were that smart." This has been a recurrent theme from friends, family and, most recently, her entire high school class at their 25th reunion.

Some months later she found herself waiting around while her husband carried out some evening project and realized she needed something to do. So she took off the shelf her textbook on Real Analysis and settled in to re-read it. The further she went, the more she realized this was really cool stuff. By the end she decided she wanted to do graduate work. "Sure, hon," said an indulgent but incredulous husband. "You're crazy!" said everyone else. They repeated the message when she finished a master's and went on towards a Ph.D., both at UC Davis. Partway through, though, her husband's skepticism turned to conviction, and he re-tooled his own career into photography so that he would be geographically flexible.

By the time she finished up with a B.A. in Math, an M.S. in Computer Science and a Ph.D. in Numerical Methods and Computational Physics, she had a highly marketable set of skills, leading to a postdoc at MIT and a bunch of research grants. It was while she was at the National Research Laboratory with one of those that she became pregnant. Nothing changed for a number of months—she had read all about how Modern Women could have it all and maintain their careers unchanged while raising a family, and it sounded reasonable to her. Then the baby came and "I didn't want to just go off and leave the little tyke!" After some thought, she concluded that what she would really like to do would be to teach full time, but with her entire load scheduled for Tuesdays and Thursdays. A ridiculous request, she knew, but she nevertheless got in touch with the University of Southern Mississippi, where she had taught before, and brought up the possibility. To her delight, they snapped it up. Since then she has been through a couple of moves and a serious illness. Spurred on by the memory of that first request, she has made a specific policy of figuring out what she really wants and needs and requesting it, and has been very much impressed with the responses she has gotten. Every place, says she, has been willing to

bend.

And that brings us to the final note of our conversation, namely a message she would really like to get out to everyone, and most especially to women. Her message is simple, succinct and very much to the point: ASK!!!

BOOK REVIEW

Londa Schiebinger, **Has Feminism Changed Science?** Harvard University Press, Cambridge MA, 1999, ISBN 0-674-38113-0, x+252 pp.

Reviewer: Margaret Bayer, Book Review Editor, University of Kansas, Lawrence, KS 66045-7523, bayer@math.ukans.edu

I was particularly drawn to this book by the title. We've seen the questions and the debates:

Are women attracted to certain areas of science more than others?

Do women do science differently from men?

Will the content of science change as more women participate?

These topics are addressed in Londa Schiebinger's book, but so are many other topics related to women and science. The book's greatest strength is as an overview of different themes in writings on women and science over the last twenty years. This includes historical analysis, statistics on the status of women in science, sociological studies of the practice of science, and theoretical work on the nature of gender and science, sprinkled with anecdotes and personal opinion.

The book is divided into three parts. I will skip over the first, "Women in Science," which deals with the history and status of women's participation in science in Europe and North America.

In the last twenty years, efforts to increase women's participation in science have changed emphasis from combating discrimination in the workplace to "pumping the pipeline." This follows a recognition that discriminatory factors occur early and persist. Perhaps it also signifies some resignation—if we cannot plug the pipeline's leak, the best we can do is to increase the initial flow. Today focus is turning to how the structure and

AFTER TENURE: WOMEN MATHEMATICIANS TAKING A LEADERSHIP ROLE (A WORKSHOP DEDICATED TO THE MEMORY OF RUTH MICHLER)

Supported by the University of North Texas and the National Science Foundation through Ruth Michler's POWRE grant

Announcement: The AWM will hold a workshop at the University of Maryland, College Park, during the weekend of March 12–14, 2004. The workshop will prepare women who have already established careers in the mathematical sciences to become leaders in the profession. The target audience will be women who have been recently tenured at academic institutions or who are at a similar level in an industrial or government position. The workshop will bring together this audience with senior women who are leaders in the profession.

Format: Leadership activities will include panels, informal discussions and case studies. The panels and discussions will address issues concerning being a department chair or college administrator, being involved in the professional societies, being a research leader, and being an effective mentor. Mathematical activities will include expository talks.

Applications: Applicants must be women holding tenure or equivalent experience and must have a work address in the US. The applicant's research must be in a field that is supported by the Division of Mathematical Sciences of the NSF. (See <http://www.nsf.gov/od/lpa/news/publicat/nsf03009/mps/dms.htm#1> for the list of supported areas.)

Each applicant should submit *five copies* of each of the following: 1) a cover letter; 2) a curriculum vita; 3) a statement explaining the applicant's experience and interest in leadership positions; and 4) a supporting letter from a senior mathematician (e.g., the chair of the applicant's department). Send the application materials to: Leadership Workshop Selection Committee, AWM, 4114 Computer & Space Sciences Building, University of Maryland, College Park, Maryland 20742-2461.

Deadline: November 20, 2003. The decision on selection for participation and funding will be made late-November/early December. An additional selection cycle will be held with deadline January 20, 2004 if space and funds remain after the November 2003 selection cycle.

expectations of the profession make it difficult for many women to persist in science and in academia.

Part II of the book is entitled "Gender in the Cultures of Science." Given the title of the book, one might expect a discussion of how the cultures of science have changed because of the influence of feminism. Instead, we get a description of how the scientific culture has not been welcoming to women, without a sense of possible changes in the last thirty years. The truth is that the wider culture has changed somewhat, under the influence of feminism. Blatant examples of sexism are less common today, partly because scientists do not think they are appropriate and partly because they self-censor for fear of the reaction.

However, more subtle differences in how women and men experience the profession abound. The book, for example, discusses research on differences in how men and women act in professional settings such as conferences. Reported and observed differences are the length of comments or questions after lectures, the tendency of women to phrase statements as questions, the

frequency of interruptions, and differences in body language and facial expressions.

An important issue for the women in science and engineering at my university is missing from Schiebinger's book. This is the greater demand for departmental and university service that women faculty face. There are several causes. In some cases, it is a direct result of the paucity of women on the faculty combined with the influence of feminism. Motivated either by tokenism or by a genuine desire to include women's perspectives, some administrators have a policy of including a woman on every committee. Women, especially junior faculty, may feel more vulnerable and are reluctant to say no to any request. In addition, it is possible that women faculty scientists are on average more competent at certain kinds of administrative work. It may be that for women to persist in the science pipeline, they must have particularly good organizational skills. A good department chair will of course try to make use of the available skills. A better department chair will also try to make equitable assignments.

COLLABORATIVE RESEARCH GRANTS FOR WOMEN

Dedicated to the memory of Ruth Michler

Supported by the University of North Texas and the National Science Foundation
through Ruth Michler's POWRE grant)

The objective of the Collaborative Research Grants is to enable women who are already tenured to carry out collaborative research at other institutions. (Women who are not yet tenured are referred to the Mentoring Grants Program.) The length of stay may vary from one week to several months, although only partial support will be provided for the longer stays. Each grant will fund travel, accommodations, and other required expenses for a tenured woman mathematician to travel to an institute or a department to do research with a specified individual. Typical grants will be under \$4000, although higher amounts may be awarded in exceptional cases. All travel must be completed by August 31, 2004. For foreign travel, US air carriers must be used (exceptions only per federal grant regulations; prior AWM approval required).

Applications: Applicants must be women mathematicians with a work address in the US. Preference will be given to women who have been recently tenured or who have an equivalent level of experience in an industrial or governmental position. The applicant's research must be in a field which is supported by the Division of Mathematical Sciences of the National Science Foundation. (See <http://www.nsf.gov/od/lpa/news/publicat/nsf03009/mps/dms.htm#1> for the list of supported areas.)

Each applicant should send *five* copies of: 1) a cover letter; 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 collaborator (who must indicate his/her availability at the proposed travel time), together with the curriculum vita of the proposed collaborator; 5) a proposed budget; and 6) information about other sources of funding available to the applicant to: Collaborative Research Grant Selection Committee, Association for Women in Mathematics, 4114 Computer & Space Sciences Building, University of Maryland, College Park, Maryland 20742-2461. 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. 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 **October 10, 2003**. An additional selection cycle will be held with deadline February 10, 2004 if funds remain after the October 2003 selection cycle.

The chapter on "Science and Private Life" raises issues of marriage between scientists, women's domestic responsibilities, the choice to have and the timing of children, and spousal hiring. We read anecdotes about women scheduling pregnancies on sabbaticals, and inducing labor so as to be available for a thesis defense. More valuable would be a look at how these issues influence the job choices that women make. At my university I see successful women professors in science and engineering with children and with husbands who share in domestic responsibilities. The female graduate students with children vary quite a bit in the amount of domestic support from husbands. (At an AWIS panel on academic life and family, I was shocked to hear the prevalent sense among graduate students—mostly life scientists—that as scientists, they would not be able to have children.) It seems that, for new Ph.D.'s who are mothers, the extent to which partners share responsibility for children is correlated to the types of jobs they seek and take.

When Schiebinger describes the day-to-day social interactions in academic departments, the commentary does not ring true. Is this because my own mathematical

subculture is different from other scientific subcultures? Is it because the author herself is an outsider? (Her degrees are in English and history.) It doesn't help to stereotype both women's and men's extracurricular interests. She focuses on sports as an activity and subject of conversation for department gatherings, and how this excludes women.

Women are once again faced with the need to succeed in typically male endeavors. No one suggests socializing around the balance beam or uneven parallel bars or while knitting or quilting. [p. 87]

In my experience, the informal conversation with both men and women covers a wide range: kids, national and international politics, movies, art, sports, nature ... and, of course, department politics (but usually not knitting or quilting).

In the third part of the book, Schiebinger turns to "Gender in the Substance of Science." In medical research, feminism has clearly helped to bring about changes in federal policy, and Schiebinger discusses these and their effect on research and drug trials. The

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. (See <http://www.nsf.gov/od/lpa/news/publicat/nsf03009/mps/dms.htm#1> for the list of supported areas.) 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 significant external governmental 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 two deadlines for receipt of applications are **October 1, 2003** and **February 1, 2004**.

case that feminism has influenced the content of basic science can best be made in the field of primatology. Schiebinger tells this interesting story of a field that awarded no Ph.D.'s to women in the 1960s and now awards almost 80% of its Ph.D.'s to women. It is not surprising that with the dramatic increase in women in the field came a dramatic change in the understanding of the subject. The sex of the subjects plays a role in the behavior, relationships, and social structures of the primates, and the interpretation of these is highly dependent on the observer.

Schiebinger also describes two other areas where feminism had, or should have had, a significant effect. In paleoanthropology, the idea that "man the hunter" was the driving force in the evolution of humans was challenged. Attention has been focused on the importance of "woman as gatherer" as a primary source of subsistence for early humans. Some researchers have challenged the model of a sexual division of labor altogether. In archaeology, the traditional focus on stone tools and hunting, along with the sexual division of academic labor, led to a

male-centered paradigm. As in primatology, the gender perspective of the scientist is a major factor in the interpretations of the data and the conclusions.

Of course, as a mathematician, I was eager to read the chapter on physics and math. Suggestions that the content of these subjects is affected by gender are indirect or vague. Over the past century or two the image of physics and mathematics as the most objective of the sciences has been connected with both the prestige of the fields and the exclusion of women. The organization and direction of the fields, especially of physics, are strongly influenced by funding sources, particularly the military. This chapter on physics and math is, however, primarily about the historical and cultural factors that have excluded women from the subjects. These cultural factors can vary greatly from country to country. A colleague told me that in Portugal, the cultural stereotype is that girls are better in math than boys. Schiebinger reports on research by Sharon Traweek, who says that there are as few women in physics in Japan as there are in the United States, even though in Japan some

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. (See <http://www.nsf.gov/od/lpa/news/publicat/nsf03009/mps/dms.htm#1> for the list of supported areas.)

Each applicant should submit *five copies* of each of the following: 1) a cover letter (if a prior AWM-NSF mentor grant has been awarded, indicate so); 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 all application materials 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, 2004**.

gender attributes are understood to be the opposite of those in the US: men are considered to be nurturing and cooperative, while women are seen as individualistic and competitive.

There is also a discussion of the gender differences in SAT scores. In particular, we learn that in response to the superior performance of girls on the verbal portion of the SAT test, the Educational Testing Service increased the science and sports content of the reading-comprehension passages. Their efforts were successful: there is no longer a statistically significant difference in girls' and boys' scores on the verbal SAT. No such changes were made to balance the scores on the mathematics portion of the SAT. Schiebinger cites sources that look at this issue and suggest ways the math SAT could be fixed.

She concludes:

What has been demonstrated is that gender abounds in the cultures of math and physics, determining to a certain extent who gets educated, gets funded, enjoys prestige, and can build upon opportunities.

I am skeptical that women or feminists will produce a different sort of mathematics. But as mathematicians become more knowledgeable about the history of women in science, gender issues in the profession today, and the feminist analyses of science, we can hope for changes in the culture and working conditions that will make mathematical careers accessible to all. Schiebinger's book can contribute to that goal.

SONIA KOVALEVSKY HIGH SCHOOL MATHEMATICS DAYS

Through grants from Coppin State College and the National Security Agency (NSA), the Association for Women in Mathematics will support 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.

An additional selection cycle will be held in February 2004 for Spring 2004 using funds remaining after the August 2003 selection cycle. AWM anticipates awarding up to six additional grants ranging on average from \$1500 to \$2200 each (\$3000 maximum per school) to universities and colleges. Historically Black colleges and universities are particularly encouraged to apply. Programs targeted toward inner city or rural high schools are especially welcomed. If selected, institutions will receive (upon request) 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) plans for activities, including specific speakers to the extent known; b) qualifications of the person(s) to be in charge; c) plans for recruitment, including the securing of diversity among participants; d) detailed itemized budget (i.e., food, room rental, advertising, copying, supplies, student giveaways, etc. Honoraria for speakers should be reasonable and should not, in total, exceed 20% of the overall budget. Stipends and personnel costs are not permitted for organizers. This grant does not permit reimbursement for indirect costs or fringe benefits. Please itemize direct costs in 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 in late February for high school days to be held in Spring 2004. 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 June 1, 2004, 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, or visit www.awm-math.org. Applications must be received by **February 4, 2004**; applications via email or fax will not be accepted.

OPPORTUNITIES

AIM Call for Proposals

Proposals are now being solicited by the American Institute of Mathematics (AIM) Research Conference Center (ARCC) for small, focused workshops to be held between summer 2004 and summer 2005. These workshops are sponsored by AIM and the National Science Foundation, which jointly fund ARCC. It is anticipated that there will be eighteen focused workshops in 2004–2005 at AIM in Palo Alto, CA. Each workshop will last approximately one week and involve up to 32 participants, allowing for close collaboration between scholars. All participants receive full funding to attend. Proposals for smaller groups than 32 are also encouraged.

Whereas fifty years ago mathematical collaboration was relatively rare, today approximately half of all mathematical papers are written by multiple authors. ARCC helps to develop and support such collaborations by holding small, focused research workshops that allow entire groups of attendees to devote their efforts toward accomplishing a specific mathematical goal. Special attention is paid to facilitating collaborations that include women, underrepresented minorities, and researchers at primarily undergraduate institutions. To aid in collaboration before and after the workshops, each workshop has an accessible website which includes open problems and progress updates.

Proposals will be accepted until **November 1, 2003**. Typically one to two pages in length, proposals should describe the specific mathematical goal comprising the focus of the workshop. Also included should be an outline of how this goal would be accomplished during the week, as well as anticipated workshop outcomes. Proposals will be judged for their scientific merit and timeliness, as well upon their appropriateness for a small, intensive workshop format. The overall quality of the workshop plan and the likelihood that the proposed goals would be achieved are also considered. A list of expected participants is required as part of the proposal, and the inclusion of women, members of underrepresented ethnic/racial groups, junior researchers, and researchers from primarily undergraduate institutions is a plus. Organizers are welcome to contact ARCC staff

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

with any questions before submitting their workshop proposals.

AIM is a nonprofit mathematics institute founded in 1994 by Silicon Valley businesspeople John Fry and Steve Sorenson to support research mathematics. 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 also sponsors conferences, small focused research groups, REUs, public math lectures, and math activities for local high school students.

See www.aimath.org/ARCC for more information about ARCC and for information about submitting a workshop proposal.

L'Oréal USA Fellowships

L'Oréal USA will award five \$20,000 fellowships each year to young women who are third and fourth year graduate students and to postdoctoral researchers whose interests are in the natural sciences (biological and physical), engineering, computer science and mathematics. The newly created fellowship program was announced in March 2003, with applications made available in May. If you are interested in learning more and feel you might qualify, please visit www.lorealusa.com/forwomeninscience. Applications will be accepted through **November 1, 2003** with appropriate documentation. The first fellowship recipients will be announced in March of 2004.

Sally Ride Science Club

The Sally Ride Science Club is now presenting its Fall Science Festivals. They will be held at North Carolina State University in Raleigh on Saturday, September 6; at the University of Michigan in Ann Arbor on Saturday, September 20; at Stanford on Sunday, October 5; and at UCLA on Sunday, November 2. The Festivals are for middle school girls, with parents and teachers also welcome to attend. The events will feature a keynote speech by astronaut Sally Ride, Discovery Workshops given by women professionals from veterinarians to rocket scientists, and a Street Fair with booths, exhibits, food, music and a raffle. There are also adult tracks of workshops for parents and teachers on topics such as hands-on science and gender equity.

For further information, see www.SallyRideFestivals.com or phone 800-561-5161. Preregistration is strongly recommended.

Travel Grants Available for ICME-10

Applications for travel grants are now available to attend the Tenth International Congress on Mathematical Education (ICME-10), which will be held July 4–11, 2004 in Copenhagen, Denmark. For general information, see www.icme-10.dk; for a travel grant application see www.nctm.org/icme10/. The travel grant application deadline is **September 30, 2003**.

COALITION FOR NATIONAL SCIENCE FUNDING

Recommendations for NSF Budget for FY 2004

The Coalition for National Science Funding supports an FY 2004 appropriation for the National Science Foundation of \$6.390 billion, the amount authorized in legislation signed by President Bush last year. This provides an additional \$1.081 billion over the 2003 appropriation of \$5.309 billion. CNSF recommends that a strategy of supporting research, education, and infrastructure—which collectively encompass the NSF's fundamental mission—be adopted, with all but \$20 million¹ of the authorized increase apportioned in the three broad areas as discussed below.

The three broad categories encompass all the directorates. CNSF recognizes that there is considerable interdependence and overlap, and consequently, considerable interplay, among most NSF programs in these broad categories.

We recommend that Congress allocate approximately half of the proposed increase of \$1.081 billion—that is, \$530 million—to NSF's core research programs and priority areas.

July, 2003; 45 signatories, including AMS, AWM, and SIAM

¹ The remaining \$20 million would support Salaries & Expenses, and the Office of the Inspector General.

Currently, only one out of four highly rated proposals the NSF receives in its core science and engineering research programs is funded. Congress should strive to ensure that all highly rated NSF proposals are funded. Grant size and duration must be increased, allowing researchers to spend more of their time doing research rather than paperwork.

In addition, new and exciting multidisciplinary initiatives at the NSF must be promoted and encouraged as today's groundbreaking research requires cooperative efforts from many disparate disciplines.

We recommend that Congress allocate approximately \$353 million of the proposed increase to support the Foundation's education and training efforts.²

CNSF supports increasing the NSF graduate student stipend to \$30,000 and urges additional support of graduate student research through increased funding for research awards. Additional funding should be directed to programs such as Research Experiences for Undergraduates, and other new and innovative programs enacted as part of the "Technology Talent" initiative to stimulate undergraduate involvement in research. Finally, we encourage support for programs, such as the Math and Science Partnerships initiative, which aim to improve K–12 math and science education, the building blocks of future scientific progress.

We recommend that Congress spend approximately \$176 million of the proposed increase on upgrading and enhancing the nation's science, engineering, and technology infrastructure.³

The National Science Board (NSB) recently suggested increasing resources to ensure that investigators have the resources and tools needed to work at the frontiers of science and engineering. These needs exist across the board, from small to mid-size to large-scale facilities, as well as other research infrastructure, including equipment, instruments, and databases. CNSF supports providing additional funds to the research directorates and to the Major Research Equipment account, in keeping with the recent NSB report's recommendations.

² This amount includes funds for education from the NSF Research and Related Activities (R&RA) budget line as well as from Education and Human Resources (EHR).

³ This amount includes funds from the NSF R&RA budget line as well as from EHR and Major Research Equipment and Facilities Construction.

PUBLICATIONS OF INTEREST

Film on Ada Byron Lovelace

"To Dream Tomorrow," the newest of Flare's Women of Power documentary films, is the story of Ada Byron Lovelace, her work with Charles Babbage, and their contributions to computing over a hundred years before the time usually thought to be the start of the Computer Age.

Daughter of a mathematically gifted, social activist mother and the "mad, bad and dangerous to know" poet, Lord Byron, Ada's life was unconventional, daring, and short. Possessed of enormous energy and talent, she faced some daunting obstacles—both in her personal life and the society of her time—as she fought to work professionally and make a contribution to science and mathematics.

Ada was just 17 when she met Babbage and became intrigued by the workings of a mechanical calculator he had designed. Though as a woman she was barred from universities and scientific libraries, Ada continued her mathematical studies, encouraged by Babbage, who brought her into contact with leading scientists of the day. These included the famous science writer, Mary Somerville; Michael Faraday, first person to generate an electrical current; Isabard Kingdom Brunel, who completed the tunnel under the Thames; and Charles Wheatstone, who was developing the telegraph. The group discussed with Babbage his idea of the "Analytical Engine," a powerful new calculator he was designing to have a central processor—the "Mill"—divided from the "Store" where data would be kept. It could be programmed to perform any calculation.

Would the government fund such a huge and costly machine? And, if this general-purpose computing machine were built, would it work? Much later, at the turn of the twenty-first century, an experiment carried out at London's Science Museum, shown in the film, supports earlier evidence that Babbage and Lovelace were justified in their confidence that the machine could have been built in their day. At the time, however, a distracted and embattled Prime Minister rejected Babbage's request for further funding, claiming that a computing machine would be "worthless as far as

science is concerned."

To help garner support to build the Analytical Engine, Ada sprang into action to describe how such a machine would function. In the Notes, published when she was 27, she went beyond even her famous contemporaries in articulating the concept of symbolic manipulation that would lead beyond number-crunching to applications that are only now, in our own time, beginning to be fully realized.

Color, 52 minutes, © 2003. Directed and produced by John Füegi and Jo Francis. Written by John Füegi, Jo Francis and Charlotte Arnholtz. For video distribution information contact Flare Productions: jf@flarefilms.org.

Where the Girls Aren't

"Where the Girls Aren't" by Karen Stabiner, author of *All Girls: Single-Sex Education and Why It Matters* (Riverhead Books), appeared in the *New York Times*, January 12, 2003. The article discusses the fact that computer science courses are not popular among high school girls, even in all-girls schools. Says Stabiner:

One camp says that girls see computers as a communications tool, and the best way to engage them is to exploit that and offer classes that stress using programs—say, designing Web sites or online magazines—over creating them. The other side says that such preferences exist only because no one has tried to expand girls' technological horizons.

The article discusses the experiences of educators at three all-girls schools. Kurt Schleunes at Marlborough School in Los Angeles has retooled the AP curriculum at his school in an attempt to make it more appealing to his students; he also wants to help them get past the social conditioning they are subject to. Hope Chafian, director of technology and curriculum at Spence School in New York City, thinks that girls are less interested in knowing how things work than boys. Ann Pollina, principal at Westover School in Middlebury, CT, is also co-director of the Connecticut Girls and Technology Network. She remarks that the lack of interest Chafian refers to might be due more to expectations of adults than to those of the girls. Her school has redone the math curriculum to make it more engaging to the young women, including more reading, and she believes similar changes would be effective in the technology arena.

Press release

Half the Insights, Half the Results, Half the Solutions Women Aren't Going into Science—And It Is Damaging Britain

An article with the provocative title above was written by Vivienne Parry and appeared in *The Guardian*, October 11, 2002. (One interesting suggestion is that women designers of appliances might be less likely to provide them with many programs, just because it can be done, but rather would provide only options that women find necessary.) The article begins:

Women are deserting the sciences in droves. For female students at university level, media studies courses win hands down over those in technology. Furthermore, those who do study science subjects either reject them as a career choice or, if they do choose that direction, don't return to the occupation for which they trained once they have had children. Short-term contracts and unfriendly working environments aren't helping. Judging from the flurry of government activity to get women back into science, this trend is worrying politicians no end.

The article goes on to detail numerous reasons why it is important that women become more involved in science and technology.

Public Access to Science: With Liberty and Research for All

[In June] Rep. Martin O. Sabo (D-MN) released a draft of the Public Access to Science Act, which will eliminate copyright protection for publications stemming from federally funded research. The laudable goal of this measure is to make research easily accessible via the internet. Sabo's move appears to further the goals of the Public Library of Science (PLOS), chaired by Harold Varmus, a group that wants to see scientific publishing move away from the subscription-based economics, which they claim limit the availability of the research. PLOS will release its first "open-access" journal, *PLOS*

From WHAT'S NEW by Robert L. Park, Friday, 27 June 2003, Washington, DC. Published by the University of Maryland and the American Physical Society. Opinions are the author's and are not necessarily shared by the University or the American Physical Society, but they should be. Archives of What's New may be found at <http://www.aps.org/WN>.

Biology in October, and plans to release *PLoS Medicine* next year.

Math Boot Camp

"Strength in Numbers: A summer program provides crucial experience to women who hope to go on to earn Ph.D.'s in mathematics" by Robin Wilson, Claremont, CA, appeared in *The Chronicle of Higher Education*, July 18, 2003. This story is about the Enhancing Diversity in Graduate Education (EDGE) program, sponsored by NSF and the Mellon Foundation and intended to help women survive as mathematics graduate students. Run by Rhonda Hughes, AWM past president, Bryn Mawr College, and Sylvia Bozeman, former Member-at-Large of the AWM Executive Committee, Spelman College, the program had been held alternately at Hughes' and Bozeman's institutions, but this year it was held at Pomona College.

Hughes and Bozeman stress the importance of mentoring for women math grad students, in a field where about 50 percent of all prospective Ph.D. students do not complete a thesis. They started EDGE six years ago; this year, the first EDGE participant to receive a Ph.D. earned hers at Dartmouth College.

The article quotes Lenore Blum, AWM Past President, Carnegie-Mellon:

Educators should take a cue from what Title IX did for female athletes, she argues. "In sports, people say: 'Just have a program. Get girls out there.'" The same is true in math. "Nothing works like getting them out there, together and doing math. You don't have to have a study" to find out why there aren't more women in math departments.

Another long-time AWM member appears in the story:

One of the instructors, Gloria C. Hewitt, is an emeritus professor of math at the University of Montana. When she earned her Ph.D., in 1962, she was the just the [seventh] African-American woman in the country to do so. She encourages the women here to ask questions during her course on abstract algebra, and even to argue with her when they disagree—something she knows will help them challenge male professors later on.

The article ends with an account of a tourist

afternoon this year's EDGE participants enjoyed.

"I would only have one math girlfriend if I hadn't come here," says Farrah M. Jackson, a mentor who is in graduate school at North Carolina State University. She was an EDGE student herself in 1999. With math girlfriends, she says, you can go to the movies or the mall. "You don't have to talk about math. But you can if you need to."

Many of us AWM old-timers also understand the importance of having "math girlfriends." I have two in my department, one right across the hall, and others around the country. Hopefully EDGE and programs like it will continue to encourage capable women to earn Ph.D.'s in mathematics, so that every woman in math will have those math girlfriends handy.

Young Women of Achievement

Young Women of Achievement: A Resource for Girls in Science, Math, and Technology by Frances A. Karnes and Kristen R. Stephens has been published by Prometheus Books. It is estimated that by the year 2010 the need for qualified personnel in science and technology careers will increase dramatically. Yet right now only 16 percent of women are involved in science and engineering careers despite the fact that women make up 45 percent of the total labor force. All this means that opportunities abound for women in the sciences.

This upbeat, very useful resource guide will give young women everything they need to start exploring and planning a career in science, math, or technology. Part I introduces readers to the many exciting career opportunities available in the sciences and provides specific strategies for planning for a future career in these areas. Part II recounts true stories of girls and young women in the sciences, detailing how they got involved and what they have accomplished. Part III offers timelines of extraordinary women throughout history, inspiring quotations, a list of websites specifically geared toward women in the sciences, suggestions for science-oriented computer software, and many other recommended resources.

Girls with an interest in science will find this book to be an excellent guide, full of useful information, as they start on the path toward realizing their career dreams.

Press release

Technology Gender Gap Halts Working Women

New Report Finds Women Still Concentrated in Low-Paying, "Pink-Collar" Jobs

Women are more educated, more employed, and employed at higher levels today than ever before, but they are still largely pigeonholed in "pink-collar" jobs, according to the new American Association of University Women (AAUW) Educational Foundation report, *Women at Work*.

Women have achieved parity with men in obtaining four-year college degrees and are more likely to work in managerial and professional careers today than twenty years ago, but they are not sufficiently prepared to move into the better-paying, higher-status, and fastest-growing occupations, including systems analysts, software designers, and engineers.

"The good news is that women have made great strides in education and the work force. The bad news is that the new high-tech economy is leaving women behind," said Mary Ellen Smyth, President of the AAUW Educational Foundation. "It's not that women are hitting a glass ceiling in the high-tech sector. It's that they don't have the keys to open the door."

The report highlights the need for advanced education for women in computer and information fields and reiterates that without better education in high-tech fields, the technological gender gap will continue to grow. National census data show that the highest proportions of women with a college education are still in traditionally female careers: teaching and nursing.

"Education in computer and information technology fields is critical to thriving in the new high-tech economy," stated Jacqueline Woods, AAUW's Executive Director. "And with only 28 percent of women studying in a field that will prepare them for work in science, engineering, or information technology, we've got a real problem."

The report also found that conflicts between work and family persist. While there is a trend toward more family-friendly work environments, there are still too few women who can take advantage of options for flexible schedules, job sharing, and telecommuting.

Among adults with more than a college degree—the group most likely to have flextime options—flextime is available to more men (55.5 percent) than women (39.7

Press release

percent).

Despite these disparities, similarities between men and women do exist, particularly when it comes to what men and women want in terms of benefits versus pay. AAUW's survey finds that the vast majority of men (74 percent) and women (83 percent) today would choose a job that pays less but provides benefits such as family leave, flexible hours, retirement benefits, and help with family care.

The report documents not only gender-based disparities but also disparities that exist among women themselves. Educational progress, for example, continues to vary by income level and by race-ethnicity; Latinas, a disproportionately low-income population, lag markedly behind as the only group that averages less than a high school education.

The women most likely to be employed in fast-growing fields with higher-than-average wages are Asian American (8.9 percent) and white (8.7 percent). Native American women are the least likely (4 percent) followed by African American women (5.7 percent) and Latinas (5.8 percent).

According to Woods, "Estimates for women's job and economic prospects for the future are mixed at best. While women are increasingly likely to enter the paid labor force, they will probably continue to be represented in the lower-status service occupations, and that's just not good enough."

Among the report's recommendations for change:

Increase educational access and opportunity for women and girls in underrepresented racial-ethnic communities.

Promote the benefits of education in computer science, engineering, mathematics, and technology to women and girls, and create opportunities and incentives for women and girls to pursue these fields.

Enhance women's education and training in financial management and economic self-sufficiency, particularly for single working mothers.

Promote equitable access to flexible work arrangements and additional research on work-family policies and programs.

To purchase this report, visit www.aauw.org or call 800-225-9998. Members of AAUW may download the report from the website for free.

RESET

ReSET is an intergenerational volunteer program that inspires and motivates children to discover and explore the worlds of science, math, and technology. It has positive impact on student ambition, attitude, and achievement. ReSET volunteers are retired scientists, engineers, and technicians who give their time, energy, and expertise in schoolchildren in the DC metro area. The diversity and depth of experience of current volunteers is impressive, from a geologist who helped plan the first landing on the moon to a biochemist who was laboratory chief at Walter Reed Army Medical Center.

ReSET makes science and math accessible, meaningful and fun. The inquiry-based approach gives students direct, intuitive, dynamic encounters with science and math—improving their literacy and awareness, and promoting a positive attitude towards once "scary" subjects. ReSET volunteers spend one hour a week during a six-week period performing experiments with the assigned class. Volunteers enjoy the pleasure and fulfillment that comes from making a genuine contribution to the lives of children, not only by opening their eyes to the wonders of science and technology, but also by building self-esteem and instilling positive educational values.

ReSET has been serving the DC community since 1989 and is always looking for funding and for volunteers. Call 202-966-2122 or visit www.resetonline.org.

SLOAN RESEARCH FELLOWSHIPS

The Alfred P. Sloan Foundation is pleased to invite nominations for the 2004 Sloan Research Fellowships. The deadline for receipt of nominations is **September 15, 2003**. Candidates must be members of the regular faculty of a college or university in the United States or Canada and be nominated by a senior scientist. Direct applications are not accepted. The eligibility criteria and further information may be found at www.sloan.org under "Fellowships" or obtained by email from teitelbaum@sloan.org.

AWM WORKSHOP AT SIAM, JUNE 2003



AWM Workshop Dinner at the SIAM Annual Meeting
(L to R): Seema Nanda and Jennifer Ryan
Brown University



(L to R): **Katarzyna A. Rejniak**, Ohio State University and **Carolyn Cho**, Physiome



AWM Workshop Dinner at the SIAM Annual Meeting
(L to R): Katharine F. Gurski, National Institute of Standards & Technology; Christina M. Weaver, State University of New York at Stony Brook; Kirsten Boyd, University of Texas at Austin; Cammey Cole, Meredith College and Leona Harris Clark, U.S. Environmental Protection Agency

FIRST ANNUAL AWM-SIAM SONIA KOVALEVSKY LECTURE AT SIAM, JUNE 2003



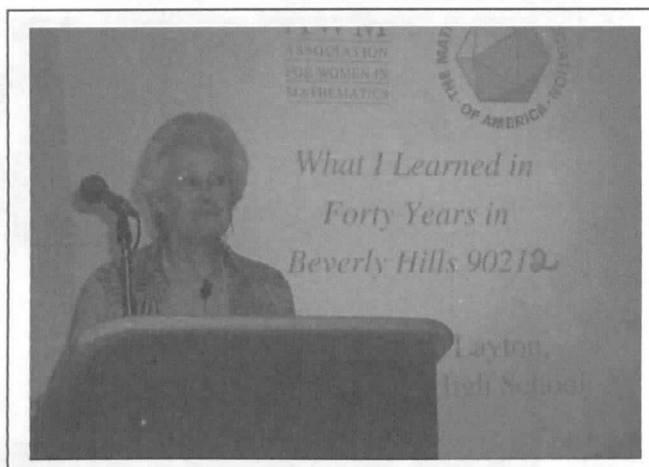
(L to R): Linda Petzold, University of California, Santa Barbara and AWM Past President Suzanne Lenhart, University of Tennessee. Professor Petzold presented the First Annual AWM-SIAM Sonia Kovalevsky Lecture entitled "*Towards the Multiscale Simulation of Biochemical Networks*" at the SIAM Annual Meeting, June 20, 2003



(L to R): AWM Past President Suzanne Lenhart, University of Tennessee, Linda Petzold, University of California, Santa Barbara & SIAM President James M. (Mac) Hyman, Los Alamos National Laboratory at the First Annual AWM-SIAM Sonia Kovalevsky Lecture, June 20, 2003

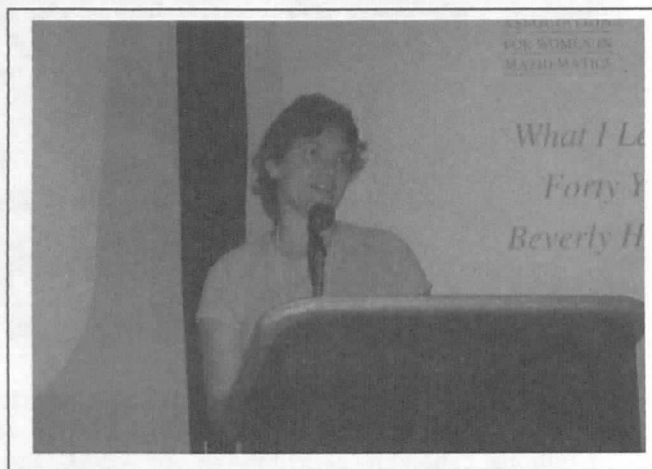
AWM-MAA INVITED ADDRESS AT MATHFEST, AUGUST 2003

(→) Katherine Puckett Layton, Beverly Hills High School presents the AWM-MAA Invited Address entitled "What I Learned in Forty Years in Beverly Hills 90212" at Mathfest (Boulder, Colorado) on August 2, 2003.

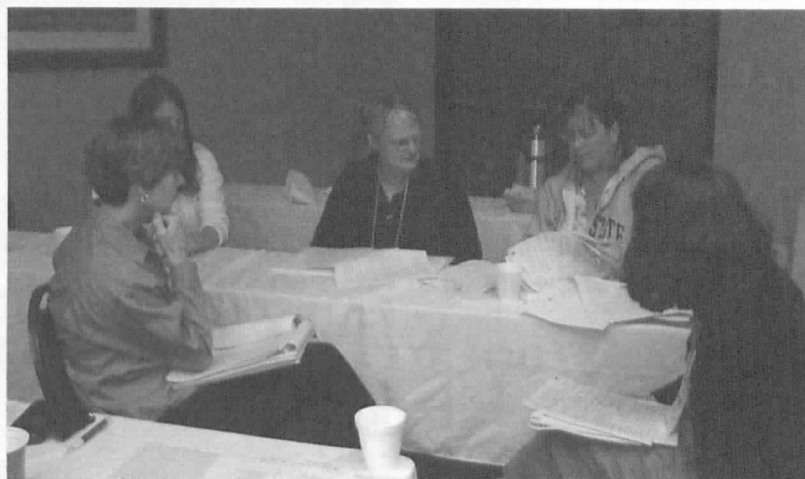


(←) L to R: Catherine Roberts, The College of the Holy Cross and Katharine Puckett Layton, Beverly Hills High School

(→) Catherine Roberts, The College of the Holy Cross introduces Ms. Layton's talk at Mathfest.



WOMEN COUNT CONFERENCE



Women Count Conference, Boulder, Colorado, July 29, 2003:
Working as a mock review panel



Women Count Conference, Boulder, Colorado, July 29, 2003:
Networking during a break

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BOWDOIN COLLEGE – DEPARTMENT OF MATHEMATICS – A tenure-track Assistant Professorship starting Fall, 2004, open to all applicants but with a strong preference for candidates specializing in algebra. Ph.D. preferred, ABD considered. Applicants must demonstrate the potential to develop a strong research program as well as the potential for excellence in teaching. Normal teaching load is two courses per semester. Review of applications begins October 12. Send completed AMS application cover sheet (www.ams.org), resume, 3 letters of recommendation, and any available evidence of teaching excellence to **Chair, Mathematics Department, Bowdoin College, 8600 College Station, Brunswick, ME 04011-8486**. Include e-mail address. Bowdoin College is committed to equal opportunity through affirmative action. Women and minorities are encouraged to apply. Bowdoin College is a private, undergraduate institution located half an hour from Portland and 2 hours from Boston. More information about the Department and College can be found at the website www.bowdoin.edu.

BROWN UNIVERSITY – DEPARTMENT OF MATHEMATICS – One professorship at the Associate Professor level with tenure, the appointment to begin July 1, 2004. [Exceptionally qualified candidates may be considered for appointment at the level of Professor.] This position is targeted in the area of **analysis**, broadly construed. 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>). 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 12, 2003, 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.

BROWN UNIVERSITY – DEPARTMENT OF MATHEMATICS – J.D. Tamarkin Assistant Professorship – One three-year non-tenured non-renewable appointment, beginning July 1, 2004. The teaching load is one course one semester, and two courses the other semester, and it consists of courses of more than routine interest. Candidates are required to have received a Ph.D. degree or equivalent by the start of this appointment, and they may have up to three years of prior academic and/or postdoctoral research experience. Applicants should have strong research potential and a commitment to teaching. Field of research should be consonant with the current research interests of the department. For full consideration, a curriculum vitae, an AMS Standard Cover Sheet, and three letters of recommendation must be received by December 1, 2003. All inquiries and materials should be addressed to: **Junior Search Committee, Department of Mathematics, Brown University, Providence, RI 02912**. To access the AMS Standard Cover Sheet, visit our website: <http://www.math.brown.edu/junioresearch.shtml>. Email inquiries should be addressed to junioresearch@math.brown.edu. Brown University is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minorities.

CALIFORNIA INSTITUTE OF TECHNOLOGY - DEPARTMENT OF MATHEMATICS – Tenure-track position at the assistant professor level is being offered with The Division of Physics, Mathematics and Astronomy at the California Institute of Technology. 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 with those publications appearing in refereed journals so noted, 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.

COLGATE UNIVERSITY – DEPARTMENT OF MATHEMATICS – The Neil R. Grabois Chair in Mathematics – Colgate University announces the establishment of the Neil R. Grabois Chair in Mathematics. The chair will be filled at either the Associate or Full Professor level. We are looking for someone with broad interests in the mathematical sciences, an established research reputation, and a record of excellence in teaching at the undergraduate level. The successful candidate will join a department with a strong commitment to meeting the diverse needs of its students and will have the opportunity to help enrich the program in the mathematical sciences. Candidates should submit a letter of application, a full curriculum vitae with a list of publications and three letters of reference to **Professor Thomas Tucker, Chair, Department of Mathematics, Colgate University, 13 Oak Drive, Hamilton, NY 13346**. Review of applications will begin December 1. Colgate University is an Equal Opportunity/Affirmative Action Employer. Developing and sustaining a diverse faculty and staff further the university's educational mission. Nominations are also accepted and should be directed to Professor Tucker. For further information about the Mathematics Department and Colgate University, see www.colgate.edu/math.

COLORADO STATE UNIVERSITY – DEPARTMENT OF MATHEMATICS – Postdoctoral Research Fellow – The Department of Mathematics at Colorado State University invites applications for a postdoctoral position for the application of geometric methods to the general problem of the analysis of large data sets. Eligibility requirements include a Ph.D. at the time of appointment and U.S. citizenship. The salary for this 11-month position is \$61,000 and the teaching load is one course per year for up to two years based on performance. We seek a talented individual with a desire to learn, develop and apply a wide range of mathematical and computational tools to an array of interdisciplinary problems in the analysis of large data sets with an emphasis on 3D face recognition and related issues. Applicants should submit a complete curriculum vita, summary of relevant educational experience and three letters of reference. All materials should be sent to: **Postdoctoral Fellow Hiring Committee Department of Mathematics Colorado State University Fort C Collins, CO 80523**. Applications received by January 1, 2004 will receive full consideration, but screening will continue until the position is filled. The position should begin as soon thereafter as possible. A job description can be found at <http://www.math.colostate.edu/info/jobs.html>. Colorado State University is an EEO/AA employer (Equal Opportunity Office, 101 Student Services).

CONNECTICUT COLLEGE – DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE – Connecticut College invites applications for a tenure-track position in statistics to begin in the fall of 2004 at the rank of assistant professor. Applicants must have a Ph.D. in statistics or a closely related field, a strong commitment to excellence in undergraduate teaching, and the potential to carry on a successful research program in the setting of a small liberal arts college. In addition, candidates should be willing to participate in curriculum development, especially in the context of a recently established interdisciplinary minor in applied statistics. Collaboration with faculty and students in other disciplines on applied research projects and supervision of mathematics students engaged in independent research are integral to this position. Connecticut College is a private, highly selective college with a strong commitment to the liberal arts tradition and an [➤]

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[←] emphasis on broad interdisciplinary teaching and research. Tenure-track faculty receive a research stipend for their first two summers and a semester's leave at full salary after their third year if they are reappointed for the full probationary period. Tenured faculty receive 80% percent of salary during a sabbatical year or up to 100% salary during a one-semester sabbatical. The normal teaching expectation is five courses annually. Salary is competitive. The College is an Affirmative Action/Equal Opportunity Employer and is engaged in further diversifying its faculty and staff. Applicants should send a letter of application, curriculum vitae, graduate transcripts, statements on teaching and research, and 3-5 letters of reference to: **Professor Kathleen A. McKeon, Chair, Department of Mathematics and Computer Science, Connecticut College Box 5561, 270 Mohegan Ave., New London, CT 06320.** (860) 439-2012 (860) 439 2700 (fax) Email: math-dept@conncoll.edu. At least one of the letters of reference must address teaching. Review of applications will begin on October 15, 2003 and continue until the position is filled. More information about this position, the department and the college may be obtained at our web page, <http://math.conncoll.edu>.

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 with administrative approval). We expect to have two or more positions. Start date July 1, 2004. For information about fields of interest and application instructions, see: <http://www.math.cornell.edu/Positions/facpositions.html/> Deadline November 1, 2003. Early applications will be regarded favorably. Cornell University is an Affirmative Action/Equal Opportunity Employer.

CORNELL UNIVERSITY – DEPARTMENT OF MATHEMATICS – The Department of Mathematics invites applications for the following positions beginning July 1, 2004: (1) Four H.C. Wang Assistant Professors, non-renewable, 3-year term; (2) Three VIGRE Postdoctoral Associates (contingent upon funding), non-renewable, 3-year term; beginning August 16, 2004: (3) Visiting positions, academic year or one semester teaching positions (any rank). For information about our positions and application instructions, see: <http://www.math.cornell.edu/Positions/facpositions.html>. Applicants will be automatically considered for all eligible positions. Deadline December 1, 2003. Early applications will be regarded favorably. 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, 2004. 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 instructions, see: <http://www.math.cornell.edu/Positions/facpositions.html> Deadline December 1, 2003. Cornell University is an Affirmative Action/Equal Opportunity Employer.

COURANT INSTITUTE OF MATHEMATICAL SCIENCES – DEPARTMENT OF MATHEMATICS - 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 15th 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 - Tenure-track Assistant Professorship with initial appointment in the 2004-2005 academic year, in Applied Mathematics. Candidates need have practical experience in statistical techniques and methods and desire to take charge of statistics curriculum. Projects are currently funded by NSF, DoD, and NIH. Collaborations with the department of computer science, medical and engineering schools, and program in 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 exceptional circumstances, an appointment to a higher level may be possible. 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 <http://www.math.dartmouth.edu/recruiting/>, or send letter of application, curriculum vita, and 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, 2004 considered first. Women and minorities are particularly encouraged to apply.

DARTMOUTH COLLEGE – DEPARTMENT OF MATHEMATICS - John Wesley Young Research Instructorship, 2 years, new or recent Ph.D.'s whose research overlaps department member's. Teach 4 ten-week courses spread over 2 or 3 quarters. \$44,676.00 for nine months; \$9,928.00 summer research stipend. Get all information 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, 2004 considered first. Dartmouth College is committed to diversity and strongly encourages applications from women and minorities.

GEORGETOWN UNIVERSITY - DEPARTMENT OF MATHEMATICS - The Department has one tenure-track position at the Assistant Professor level beginning August 25, 2004. The Ph.D. degree in mathematics is required with strong research credentials in analysis, applied mathematics, or mathematical statistics, and interests commensurate with those of the department. The Department is committed to excellence in both research and undergraduate teaching, and is looking toward reestablishment of a graduate program with a concentration in applied mathematics and statistics. An application should include: a completed AMS standard cover sheet, a curriculum vitae, reprints or preprints of no more than three research papers, evidence of effective undergraduate teaching, and at least three letters of recommendation. Send to: **Professor Hans Engler, Chairman of the Hiring Committee, Department of Mathematics, Georgetown University, Washington, DC 20057-1233.** Consideration of complete applications will begin December 1, 2003, and will continue until available positions are filled. Georgetown University is an Equal Employment Opportunity and Affirmative Action institution in employment and admissions.

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JOHNS HOPKINS UNIVERSITY - DEPARTMENT OF MATHEMATICS – Tenure-track and non-tenure track – Subject to availability of resources and administrative approval, the following positions are available for the 2004-05 academic year. ● Tenure-track and senior positions in all areas of pure mathematics. ● One non-tenure track J. J. Sylvester Assistant Professor. For more details, see <http://www.mathematics.jhu.edu/search> or send email to math@math.jhu.edu. Applications should be sent to: **Appointments Committee, Department of Mathematics, Johns Hopkins University, 404 Krieger Hall, Baltimore, MD 21218-2689**, and should include a complete curriculum vitae, at least four letters of recommendation (including a letter concerning teaching) and a description of current and planned research. Applications received by November 1, 2003 will be given priority. Johns Hopkins University is an Affirmative Action /Equal Opportunity Employer. Minorities and women candidates are encouraged to apply.

MICHIGAN STATE UNIVERSITY – DEPARTMENT OF MATHEMATICS – Tenure-track, academic year, assistant/associate professorship of mathematics in the Lyman Briggs School, an undergraduate, residential, liberal arts science program within the College of Natural Science. Candidates must have a Ph.D. in mathematics, mathematics education, or statistics and a research record commensurate with an appointment at the assistant or associate professor rank. Preference will be given to applicants with at least five years experience and who are particularly passionate about teaching mathematics to undergraduates. Duties include teaching in the Lyman Briggs School calculus series, supervising undergraduate teaching assistants, and maintaining an active research program. This position offers exciting opportunities for joint appointments or collaboration with the Department of Mathematics, Department of Statistics and Probability, the Division of Science and Mathematics Education, the College of Education, the Drew Science Enrichment Program, or with any of the basic science departments. The Briggs School environment offers opportunities for integrating mathematics with its other science and humanities courses, and the School and College encourage scholarship across disciplinary boundaries. All application material should be **uploaded to the Lyman Briggs School account at www.mathjobs.org**, a free service to applicants. Complete applications should be received by November 3, 2003; later submissions may be considered. Questions should be directed to Ms. Kathie Ellis at Lyman Briggs School, E-28 Holmes Hall, Michigan State University, East Lansing, MI 48825-1107 or (517) 353-6486 or ellis@msu.edu. See www.msu.edu and www.msu.edu/unit/lbs for further information. Michigan State University is an Affirmative Action/Equal Opportunity Institution. Applicants who are not U.S. citizens or permanent residents must provide documentation of employment authorization for the U.S. Persons with disabilities have the right to request and receive reasonable accommodation. Women and minorities are strongly encouraged to apply.

MICHIGAN STATE UNIVERSITY - DEPARTMENT OF STATISTICS AND PROBABILITY – The Department of Statistics and Probability at Michigan State University invites applications for a tenure track Assistant Professor position to start August 16, 2004. Candidates should have a Ph.D. with a concentration in statistics and/or probability and strong research and teaching potential. Moreover candidates should have research interests in applications of these fields to interdisciplinary research in the biological sciences. Please supply a curriculum vitae, a summary of scholarly interests, and evidence of teaching experience, as well as having three letters of recommendation sent directly to: **Search Committee, Department of Statistics and Probability, A415 Wells Hall, Michigan State University, East Lansing, MI 48824-1027**. The selection process will begin December 1, 2003 and continue until the position is filled. MSU is an Affirmative Action/Equal Opportunity Institution. Persons with disabilities have the right to request and receive reasonable accommodation. Minorities and women are strongly encouraged to apply. For additional information about the MSU Department of Statistics and Probability please visit: www.stt.msu.edu.

MONMOUTH UNIVERSITY – DEPARTMENT OF MATHEMATICS - Two tenure-track mathematics positions – The Mathematics Department of Monmouth University is seeking two full-time faculty members for tenure track appointments which start August 25, 2004. Both positions require a Ph.D. in mathematics or mathematics education (if mathematics education, at least the equivalent of a masters degree in mathematics is required). Dedicated, effective teaching is the primary responsibility; duties include teaching both upper and lower level mathematics courses. Mathematicians working in any field of research within the mathematical sciences are invited to apply. We're particularly interested in hiring faculty with active scholarly interests in algebra or number theory, research in undergraduate mathematics education, developmental mathematics, or the mathematical education of teachers. There are expectations of continued scholarly activity consistent with the 9-credit per semester teaching load, as well as university service. If you have questions about the position or the department, contact the department chair, Bonnie Gold, bgold@monmouth.edu. The Mathematics Department has 13 full-time faculty members and approximately 12 part-time instructors. The Department offers baccalaureate programs in mathematics and mathematics education. The normal teaching load for tenure-track faculty is 9 credit hours per semester. The Department has a dedicated computer teaching laboratory, and administers the Mathematics Skills Center, which provides peer tutoring. More information on the department can be found at <http://www.monmouth.edu/academics/deptlinks/mathematics.asp>. Monmouth University, located in Monmouth County along the Central Jersey shore approximately one hour south of New York City and 1.5 hours east of Philadelphia, designated a teaching university by the State of New Jersey, has 5400 students, of whom 1400 are at the graduate level. Our location puts us near a wide variety of industries, including telecommunications, financial, educational testing, and computer software. Applicants should send cover letter, resume, teaching statement, application form (available at <http://mathematics.monmouth.edu/app/GenApp/form.htm> or request by telephone from the department secretary, 732-571-4461), copies of graduate transcripts, and 3 letters of reference, at least one of which should discuss the applicant's teaching, to: **Frank Lutz, Dean School of Science, Technology and Engineering Monmouth University West Long Branch, NJ 07764-1898**. Applications and supporting materials must be postmarked on or before December 1, 2003 to assure full consideration. Monmouth University is an Equal Opportunity, Affirmative Action Employer.

NORTHWESTERN UNIVERSITY – DEPARTMENT OF MATHEMATICS – Applications are invited for anticipated **tenure-track or tenured positions** starting September 2004. 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, Northwestern University, Department of Mathematics, 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 2003. 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 – Applications are solicited for **two Ralph Boas assistant professorships** of three years each starting in September 2004. Fields of interest within the department include Algebra, Algebraic Geometry, Analysis, Dynamical Systems, Mathematical Physics, Probability, Partial Differential Equations and Topology. They are non-tenure track. Applications should be sent to the **Boas Selection Committee, Northwestern University, Department of Mathematics, 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) three letters of recommendation including one which discusses [→]

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[◀] 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, 2003. Northwestern University is an affirmative action, equal opportunity employer committed to fostering a diverse faculty; women and minority candidates are especially encouraged to apply.

THE 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 2004. Candidates in all areas of pure and applied mathematics are invited to apply. A Ph.D. in mathematics, 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 have a Ph.D. in mathematics and to present evidence of excellence in research and teaching. Please send a CV and have at least three letters of recommendation sent to: **Advisory Committee, Department of Mathematics, The Ohio State University, 231 W. 18th Avenue, Columbus, OH 43210**. Applications are considered on a continuing basis but the review process begins November 17, 2003. Please direct inquiries to facultysearch@math.ohio-state.edu. The Ohio State University is an Equal Opportunity, Affirmative Action employer. Women, minority, veterans, and individuals with disabilities are encouraged to apply.

PITZER COLLEGE – DEPARTMENT OF MATHEMATICS – Assistant Professor, Tenure-Track – Pitzer College seeks a mathematician who can work with us to strengthen our mathematics program, especially for science and mathematics students; who can design and teach general-education courses that stress the beauty of mathematics and its relationship to the world; and who can engage the interest of women and minority students in mathematics. Candidates should have a commitment to undergraduate teaching at a liberal arts college where there is an emphasis on high-quality instruction and research. Demonstrated excellence in teaching and research are required. Applicants must have completed the Ph.D. in mathematics by Summer, 2004. The field of specialization is open. Pitzer College, a member of the Claremont Colleges, has a strong institutional commitment to the principles of diversity in all areas and strongly encourages candidates from underrepresented social groups. We favor candidates who can contribute to the College's distinctive educational objectives, which promote interdisciplinary perspectives, intercultural understanding, and concern with social responsibility and the ethical implications of knowledge and action. Pitzer College is an Affirmative Action/Equal Opportunity Employer. For the successful applicant with the relevant interests, affiliations are possible with the intercollegiate departments of Asian American Studies, Black Studies, Chicano/Latino Studies, and/or Women's Studies. Over 40 Ph.D. mathematicians, a weekly colloquium series, research-level seminars, and fine mathematical library collections are present in Claremont. To apply, send a letter of application, curriculum vitae, selected evidence of excellence in teaching and research, statement of teaching philosophy, a description of your research, and three letters of recommendation to **Alan Jones, Dean of Faculty, 1050 N. Mills Ave, Claremont, CA 91711**. Applications received by November 14, 2003 will be given first consideration.

PURDUE UNIVERSITY – DEPARTMENT OF MATHEMATICS – Applications are invited for tenure-track Assistant Professor or three-year Research Assistant Professor appointments beginning August 2004. Ph.D. by August 16, 2004, exceptional research promise, and strong teaching record are required. Applications will also be accepted for possible appointments at the Associate Professor/Professor level. Ph.D. and excellence in research and teaching are 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 2004. 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, 150 N. University St., West Lafayette, IN 47907-2067**. Review of applications will begin November 15, 2003 and continue until available positions are filled. Offers for tenured and tenure-track positions may be made at any time; some offers for RAP and visiting positions will be made before the end of January 2004. The Mathematics Department is participating in the development of several interdisciplinary research clusters at Purdue. Please refer to <http://www.science.purdue.edu/COALESCE/> for details about these positions and application procedures. 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 three tenure-track appointments at the Assistant Professor level to begin July 2004. Successful applicants must have a strong research record and demonstrate the potential for research leadership. 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. Exceptionally qualified candidates may be appointed at the rank of Associate Professor. Candidates should have a Ph.D. in pure or applied mathematics, statistics, or a related area. We anticipate hiring in the following three areas: ● algebra and number theory, analysis, dynamical systems, or in exceptional cases other areas of pure mathematics. ● statistics or probability theory; we are interested applicants working on fundamental problems and applied areas. ● engineering mathematics: geometric control theory, communications theory, or numerical analysis. Candidates in this area must be eligible for registration as a professional engineer in Ontario. 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 **James A. Mingo, Associate Head Department of Mathematics and Statistics, Queen's University, Kingston, Ontario K7L 3N6 CANADA** by December 1, 2003 (or January 1, 2004 in the case of candidates for the position in engineering mathematics). fax: (613)533-2964, e-mail: position@mast.queensu.ca, <http://www.mast.queensu.ca>. Applications will be considered until the position is filled. More details are available at <http://www.mast.queensu.ca/jobs>. All qualified candidates are encouraged to apply; however, Canadian citizens and permanent residents will be given priority. Queen's University is committed to employment equity and welcomes applications.

SOUTHERN ILLINOIS UNIVERSITY CARBONDALE – DEPARTMENT OF MATHEMATICS – Algebra/Combinatorics Position – Applications are invited for a tenure-track position in algebra/combinatorics at the assistant professor level to begin on August 16, 2004. Applicants must have a research program in a field of algebra, number theory or combinatorics, and must demonstrate evidence of, or potential for, excellence both in research and in teaching at both undergraduate and graduate levels. The department is particularly seeking applicants whose research interests augment existing strengths within the department (see www.math.siu.edu/facint.html), and those whose research involves applications of mathematics. Ph.D. in mathematics required by August 15, 2004. Postdoctoral experience preferred. Send letter of application, CV, and three letters of recommendation to: **Algebra/Combinatorics Position, Department of Mathematics, Southern Illinois University Carbondale, Carbondale, Illinois 62901-4408**. Review of applications will begin December 8, 2003, and continue until position is filled. SIUC is an affirmative action/equal opportunity employer that strives to enhance its ability to develop a diverse faculty and staff and to increase its potential to serve a diverse student population. All applications are welcomed and encouraged and will receive consideration.

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SOUTHERN ILLINOIS UNIVERSITY CARBONDALE – DEPARTMENT OF MATHEMATICS – Numerical Analysis Position – Applications are invited for a tenure-track position in numerical analysis at the assistant professor level to begin on August 16, 2004. Applicants must have a research program in numerical analysis, and must demonstrate evidence of, or potential for, excellence both in research and in teaching at both undergraduate and graduate levels. Ph.D. in mathematics required by August 15, 2004. Postdoctoral experience preferred. Send letter of application, CV, and three letters of recommendation to: **Numerical Analysis Position, Department of Mathematics, Southern Illinois University Carbondale, Carbondale, Illinois 62901-4408**. Review of applications will begin December 8, 2003, and continue until position is filled. SIUC is an affirmative action/equal opportunity employer that strives to enhance its ability to develop a diverse faculty and staff and to increase its potential to serve a diverse student population. All applications are welcomed and encouraged and will receive consideration.

SOUTHERN ILLINOIS UNIVERSITY EDWARDSVILLE – DEPARTMENT OF MATHEMATICS AND STATISTICS – Southern Illinois University Edwardsville, a comprehensive state university 20 miles from downtown St. Louis, invites applications for two tenure-track positions at the rank of assistant professor beginning August 2004. For one position, the applicant should have a Ph.D. in Operations Research or closely related field. For the second position, applicants should have a Ph.D. in mathematics with experience in mathematics education. Review of applications will begin on December 19, 2003. SIUE is a state university; benefits under state-sponsored plans may not be available to holders of F1 or J1 visas. For more information visit: <http://www.siu.edu/MATH>

STANFORD UNIVERSITY – DEPARTMENT OF MATHEMATICS – Szegő Assistant Professorship – The Department expects to make one or more Szegő assistant professor appointments. These appointments are for a term of three years beginning in September 2004. 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. 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 2002. 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 **Szegő Search Committee, Department of Mathematics, Stanford University, Stanford, CA 94305** by December 15, 2003. Stanford is an Affirmative Action, Equal Opportunity Employer.

STANFORD UNIVERSITY – DEPARTMENT OF MATHEMATICS – The Department is considering applications for a tenure-track or tenured faculty appointment beginning September 2004. 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, a brief statement of research interest, 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) or names and addresses of three references (senior 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, 2004. Stanford is an Affirmative Action, Equal Opportunity Employer.

SYRACUSE UNIVERSITY – DEPARTMENT OF MATHEMATICS – Tenure-track position in algebra/topology beginning August, 2004. Ph.D. in mathematics required. Candidates should have a record of strong accomplishment and potential in both research and teaching. Although preference will be given to candidates in algebra or topology, exceptional candidates in all areas will be considered. Preference will also be given to candidates who have postdoctoral experience and whose research interests overlap and/or complement those of existing faculty. Areas of algebra and topology presently represented in the department include algebraic geometry, algebraic topology, commutative algebra, noncommutative algebra, and representations of algebras. See <http://math.syr.edu> for more information. Applications should include a cover letter, CV, three letters of recommendation addressing research qualifications, and at least one letter of recommendation addressing teaching. Send applications to **Chair, Department of Mathematics, Syracuse University, Syracuse, NY 13244**. Screening of candidates begins November 15, 2003 and continues until the position is filled. Syracuse University is an Equal Opportunity/Affirmative Action Employer committed to fostering a diverse faculty; women and minority candidates are especially encouraged to apply.

SYRACUSE UNIVERSITY – DEPARTMENT OF MATHEMATICS – Position in analysis, without restriction on rank, beginning August, 2004. Ph.D. in mathematics required. Senior level candidates should have a record of outstanding accomplishment and potential in both research and teaching. Junior level candidates should have a record of strong accomplishment and potential in both research and teaching. Although preference will be given to candidates in analysis, exceptional candidates in all areas will be considered. Preference will also be given to candidates whose research interests overlap and/or complement those of existing faculty. Areas of analysis presently represented in the department include real analysis, PDE, several complex variables, and probability. See <http://math.syr.edu> for more information. Applications should include a cover letter, CV, three letters of recommendation addressing research qualifications, and at least one letter of recommendation addressing teaching. Send applications to **Chair, Department of Mathematics, Syracuse University, Syracuse, NY 13244**. Screening of senior level candidates is ongoing. Screening of junior level candidates begins November 15, 2003 and continues until the position is filled. Syracuse University is an Equal Opportunity/Affirmative Action Employer committed to fostering a diverse faculty; women and minority candidates are especially encouraged to apply.

SYRACUSE UNIVERSITY – DEPARTMENT OF MATHEMATICS – Tenure-track position in applicable mathematics beginning August, 2004. Ph.D. in mathematics required. Candidates should have a record of strong accomplishment and potential in both research and teaching. Although preference will be given to candidates in applicable mathematics, exceptional candidates in all areas will be considered. Preference will also be given to candidates who have postdoctoral experience and whose research interests overlap and/or complement those of existing faculty. Areas of applicable mathematics presently represented in the department include applied mathematics/numerical analysis, combinatorics, and statistics. See <http://math.syr.edu> for more information. Applications should include a cover letter, CV, three letters of recommendation addressing research qualifications, and at least one letter of recommendation addressing teaching. Send applications to **Chair, Department of Mathematics, Syracuse University, Syracuse, NY 13244**. Screening of candidates begins November 15, 2003 and continues until the position is filled. Syracuse University is an Equal Opportunity/Affirmative Action Employer committed to fostering a diverse faculty; women and minority candidates are especially encouraged to apply.

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TEXAS A&M UNIVERSITY – DEPARTMENT OF MATHEMATICS – Tenured and tenure-eligible faculty positions beginning fall 2004. The field is open, but we particularly seek applications from individuals whose mathematical interests would augment and build upon existing strengths both within the Mathematics Department as well as other departments in the University. Salary, teaching loads and start-up funds are competitive. For a **Tenured Position** the applicant should have an outstanding research reputation and would be expected to fill a leadership role in the department. An established research program, including success in attracting external funding and supervision of graduate students, and a demonstrated ability and interest in teaching are required. Informal inquiries are welcome. For an **Assistant Professorship**, we seek strong research potential and evidence of excellence in teaching. Research productivity beyond the doctoral dissertation will normally be expected. We also have several visiting positions available. Our **Visiting Assistant Professor** positions are for a three year period and carry a three course per year teaching load. They are intended for those who have recently received their Ph.D. and preference will be given to mathematicians whose research interests are close to those of our regular faculty members. In addition, as part of our VIGRE grant, we may have one or more positions with a reduced teaching load. **Senior Visiting Positions** may be for a semester or one year period. For full consideration, the complete dossier should be received by December 15, 2003. Applicants should send the completed "AMS Application Cover Sheet", a vita, and arrange to have letters of recommendation sent to: **Faculty Hiring, Department of Mathematics, Texas A&M University, College Station, Texas 77843-3368**. Further information can be obtained from: <http://www.math.tamu.edu/hiring>. Texas A&M University is an EOE/AA employer and the Department encourages applications from women and minorities.

THE UNIVERSITY OF ARIZONA – DEPARTMENT OF MATHEMATICS – The Department of Mathematics is seeking applications for tenure-track positions at either the Assistant, Associate or Full Professor level, which will begin in Fall 2004. By the time of appointment, candidates are expected to have a Ph.D. and excellent research record or potential, as well as a strong commitment to teaching. Rank and salary depend on the qualifications of the selected candidate(s). The Department may also have postdoctoral or visiting positions for the 2004-2005 academic year (Ph.D. required). Further information about the full range of the Department's research and educational activities may be found at <http://www.math.arizona.edu>. Application review begins October 1, 2003 and continues as long as positions remain unfilled. Applications received before October 1, 2003 will receive the fullest consideration; applications received after January 2, 2004 are unlikely to be considered. Please send a letter of interest (specifying position(s) applied for), an AMS Cover Sheet (which can be downloaded from <http://www.ams.org/cover sheet>), a curriculum vitae with a list of publications, a statement of research interests, a statement of teaching experiences/philosophy and a minimum of three (3) letters of recommendation (enclose or arrange to be sent) to: **Personnel Committee, Department of Mathematics, University of Arizona, P.O. Box 210089, Tucson, Arizona 85721-0089**. The University of Arizona is an EEO/AA Employer-M/W/D/V

UNIVERSITY AT BUFFALO, SUNY – DEPARTMENT OF MATHEMATICS – Several tenure-track assistant professors, effective August, 2004. Salary will be competitive. We seek candidates from all fields, particularly Algebra, Applied Mathematics and Topology. Applicants should have excellent research accomplishments and potential, a Ph.D. in the mathematical sciences and a strong commitment to teaching. A complete application consists of a curriculum vitae, a statement of research interests and four letters of recommendation. These materials should be sent to: **Search Committee, Department of Mathematics, University at Buffalo, SUNY, Mathematics Building 244, Buffalo, NY 14260-2900**. The deadline for applications is November 3, 2003. Late applications will be considered until the positions are filled. No electronic applications will be accepted. The University at Buffalo is an Equal Opportunity/Affirmative Action Employer/Recruiter. We are interested in identifying prospective minority and women candidates. No person, in whatever relationship with the University at Buffalo, shall be subject to discrimination on the basis of age, color, creed, handicap, marital status, national origin, race, religion, sex, sexual orientation or veteran status.

UNIVERSITY OF CALIFORNIA AT BERKELEY – DEPARTMENT OF MATHEMATICS – Charles B. Morrey Jr. Assistant Professorships – Special Non-tenure track positions effective July 1, 2004. 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: **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 applicants 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 is available courtesy of the American Mathematical Society. Applications must be postmarked by December 1, 2003. Applications postmarked after the deadline will not be considered. The University of California is an Equal Opportunity, Affirmative Action Employer.

UNIVERSITY OF CALIFORNIA AT BERKELEY – DEPARTMENT OF MATHEMATICS – Temporary postdoctoral positions – Several temporary positions beginning in Fall 2004 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: **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 applicants 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, 2003. Applications postmarked after the deadline will not be considered. The University of California is an Equal Opportunity, Affirmative Action Employer.

UNIVERSITY OF CALIFORNIA AT BERKELEY – DEPARTMENT OF MATHEMATICS – Tenured or Tenured Track position – Pending budget approval, we invite applications for one or more positions effective July 1, 2004 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: **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 [→]

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[←] 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, 2003. 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 – Several professorships – Subject to availability of resources and administrative approval, the following positions are available for the 2004-05 Academic year. **(1) 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. **(2) 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. **(3) Several Assistant Adjunct 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. **(4) 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. **(5) Several Assistant Adjunct Professorships and Research Postdocs.** Normally one year appointments, with the possibility of renewal. Strong research and teaching background required. Salary \$48,900-\$53,200. Teaching load for Adjuncts: six quarter courses per year. **(6) 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 5, 2004. 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, SANTA CRUZ – DEPARTMENT OF MATHEMATICS – Youngs Visiting Assistant Professorship – One or more Youngs Visiting Assistant Professorships effective Summer or Fall 2004. 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 6/30/04) in Mathematics or a closely related field. Demonstrated excellence in teaching and research. Salary Range: \$48,900 - 51,700. Deadline: Applications must be postmarked by January 12, 2004. Applicants should send curriculum vitae, a summary of research and teaching experience and three letters of recommendation. At least one recommendation must address teaching experience and ability (all letters will be treated as confidential documents). Please refer to provision #T04-01 in your reply. All applications should be sent to: **Recruitment Committee, UCSC Mathematics Department, 1156 High Street, Santa Cruz, CA 95064.** Inquiries [not applications] can be sent to mathrcr@cats.ucsc.edu. UCSC is an EEO/AA employer. See <http://www.math.ucsc.edu/Jobs/Current.html> for complete job description.

UNIVERSITY OF GEORGIA – DEPARTMENT OF MATHEMATICS – The Department of Mathematics invites applications for SIX Postdoctoral Associate positions that will be available beginning fall 2004, and ONE Franklin Fellowship (a teaching postdoctoral position) beginning Spring 2004; four of the above six Postdoctoral positions are VIGRE Postdoctoral Associates and are contingent on extension of the departments VIGRE grant. Please visit www.math.uga.edu for detailed descriptions of these positions. Applicants should have a Ph.D. in pure or applied mathematics and exhibit an outstanding research potential in mathematics with a commitment to excellence in teaching. They should arrange to have three letters of reference concerning research and one letter concerning teaching sent directly to the address below. The application should include a completed AMS Standard Cover Sheet, a curriculum vita, a statement about their current and future research plans, and a statement about teaching experiences and philosophy. Submit the application to **The Chair, Search Committee, Department of Mathematics, University of Georgia, Athens, Georgia 30602.** Emails can be directed to search@math.uga.edu. To assure full consideration, applications must be received by Jan. 9, 2004. For the Franklin Fellowship, the deadline is November 7, 2003. The University of Georgia is an Affirmative Action/Equal Opportunity Employer that is committed to increasing the diversity of its faculty. We especially encourage applications from women, minorities, and underrepresented groups.

UNIVERSITY OF LOUISVILLE – DEPARTMENT OF MATHEMATICS – Tenured position Pending administrative approval, the Department of Mathematics at the University of Louisville invites applications for a tenured position, at the associate professor level, to begin July 1, 2004. Preference will be given to applicants who can strengthen the Department's new Ph.D. program in Applied and Industrial Mathematics. Applicants should have an established research program and are expected to play a leadership role in the Department. Desired qualities include success in attracting external funding, experience supervising graduate students, and a dedication to the teaching of mathematics. 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 candidate's 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, 2003 and continue until the position is filled. E-mail 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.

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 is given to candidates who receive the Ph.D. degree in 2002 or later and who submit a completed application by December 12, 2003. 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@math.umich.edu, or by mail from: **Hiring Committee, Department of Mathematics, University of Michigan, 2074 East Hall, 525 E. University, Ann Arbor, MI 48109-1109.** Deadline for Applications: December 12, 2003. URL for more information about the position or institution/company: <http://www.math.lsa.umich.edu/information/positions.shtml>

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UNIVERSITY OF NOTRE DAME - DEPARTMENT OF MATHEMATICS - Regular Position in Algebra - The Department of Mathematics of the University of Notre Dame invites applications for a position in algebra with a particular emphasis in number theory, representation theory and arithmetic geometry, to start on August 24, 2004. Candidates at any rank will be considered. 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, 2004. Information about the department is available at <http://www.math.nd.edu/math>.

UNIVERSITY OF PENNSYLVANIA - DEPARTMENT OF MATHEMATICS - Junior Positions in Mathematics - Several positions (including a possible tenure-track position) will be available beginning July 1, 2004. 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: **Personnel Committee, Department of Mathematics, University of Pennsylvania, Philadelphia, PA 19104-6395**. These are due by January 1, 2004. The University of Pennsylvania is an equal opportunity, affirmative action employer.

UNIVERSITY OF PENNSYLVANIA - DEPARTMENT OF MATHEMATICS - Tenure Positions in Mathematics - We anticipate that commencing July 1, 2004, 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 PITTSBURGH - DEPARTMENT OF MATHEMATICS - Number Theory/Cryptography or Algebraic Geometry, Representing Theory - The Mathematics Department of the University of Pittsburgh invites applications for a tenure-track position in Number Theory /Cryptography or Algebraic Geometry /Representation Theory to begin in the Fall Term 2004, pending budgetary approval. The appointment is at the Assistant Professor level or above, depending on the credentials of the applicant. We seek excellence in teaching and research so applicants should demonstrate substantial research accomplishment and dedication to teaching. Send a vita, three letters of recommendation, a research statement and evidence of teaching accomplishments by December 5, 2003 to: **Search Committee in Algebra, Department of Mathematics, University of Pittsburgh, Pittsburgh, PA 15260**. The University of Pittsburgh is an Affirmative Action, Equal Opportunity Employer. Women and members of minority groups under-represented in academia are especially encouraged to apply.

UNIVERSITY OF PITTSBURGH - DEPARTMENT OF MATHEMATICS - Analysis - The Mathematics Department of the University of Pittsburgh invites applications for a tenure-track position in Analysis to begin in the Fall Term 2004, pending budgetary approval. The appointment is at the Assistant Professor level. We seek excellence in teaching and research so applicants should demonstrate substantial research accomplishment and dedication to teaching. Send a vita, three letters of recommendation, a research statement and evidence of teaching accomplishments by December 5, 2003 to: **Search Committee in Analysis, Department of Mathematics, University of Pittsburgh, Pittsburgh, PA 15260**. The University of Pittsburgh is an Affirmative Action, Equal Opportunity Employer. Women and members of minority groups under-represented in academia are especially encouraged to apply.

UNIVERSITY OF PITTSBURGH - DEPARTMENT OF MATHEMATICS - Mathematical and Computational Biology - The Mathematics Department of the University of Pittsburgh invites applications for a tenure-track position in Mathematical and Computational Biology to begin in the Fall Term 2004 subject to budgetary approval. The appointment is at the Assistant Professor level. We seek excellence in teaching and research so applicants should demonstrate substantial research accomplishment and dedication to teaching. Send a vita, three letters of recommendation, a research statement and evidence of teaching accomplishments by December 5, 2003 to: **Search Committee in Biology, Department of Mathematics, University of Pittsburgh, Pittsburgh, PA 15260**. The University of Pittsburgh is an Affirmative Action, Equal Opportunity Employer. Women and members of minority groups under-represented in academia are especially encouraged to apply.

UNIVERSITY OF OREGON - DEPARTMENT OF MATHEMATICS - Applications are invited for tenure-track Assistant or Associate Professor positions in all areas of pure and applied mathematics, statistics and mathematics education. Qualifications are a Ph.D. in the mathematical sciences, an excellent record of research accomplishment, and evidence of teaching ability. 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 Department of Mathematics, University of Oregon, Eugene, OR 97403-1222**. Application materials may NOT be submitted electronically. Closing date is January 5, 2004. Women and minorities are encouraged to apply. The University of Oregon is an EO/AA/ADA Institution committed to diversity.

UNIVERSITY OF WATERLOO - DEPARTMENT OF PURE MATHEMATICS - Tenure-track positions - The Department of Pure Mathematics at the University of Waterloo invites applications for one or more anticipated tenure-track positions starting July 1, 2004. The Department is particularly interested in candidates with research interests in algebra, geometry or topology, though outstanding candidates in all areas of Pure Mathematics will be considered. 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 14, 2003. 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. All qualified candidates are encouraged to apply; however Canadians and permanent residents will be given priority. 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. F. Zorzitto, 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/

ADVERTISING DEADLINE for the November/December 2003 is OCTOBER 1, 2003

-more-

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UNIVERSITY OF WATERLOO – DEPARTMENT OF PURE MATHEMATICS – NSERC University Faculty Award – The Department of Pure Mathematics at the University of Waterloo is seeking to nominate a woman or aboriginal candidate for an NSERC University Faculty Award in the Fall 2003 competition. A departmental nominee will have demonstrated the potential for strong research in a field that fits in with the research interests of the department, as well as the promise of strong teaching qualifications. A successful nominee would assume a tenure-track position in the department, normally effective July 1, 2004, with a reduced teaching load for the duration of the award. The University Faculty Award was created by the Natural Science and Engineering Research Council to encourage Canadian universities to appoint very promising women or aboriginal researchers to tenure-track positions in science and engineering. Further information on the program can be found at the NSERC web page: http://www.nserc.ca/programs/schol4_e.htm In accordance with the NSERC regulations for the awards, an applicant must be female or aboriginal and must be a Canadian citizen or permanent resident of Canada. An applicant must either hold a doctorate degree, or have completed all the requirements for such a degree by the proposed appointment date. Those interested in being nominated should submit their curriculum vitae, preprints, reprints, and should arrange for three letters of recommendation to be sent directly from the referees. Application materials should arrive by September 1, 2003. Please send applications to: **Dr. F. Zorzitto, Chair, Department of Pure Mathematics, University of Waterloo, Waterloo, Ontario, Canada N2L 3G1.** The department's Web page is at http://www.math.uwaterloo.ca/PM_Dept/

UNIVERSITY OF WISCONSIN, MADISON – DEPARTMENT OF MATHEMATICS – The Department of Mathematics anticipates openings for two positions to begin August 23, 2004, at the tenure-track (assistant professor) level. Applications are invited in all areas of mathematics. Candidates should exhibit evidence of outstanding research potential, normally including significant contributions beyond the doctoral dissertation. A strong commitment to excellence in instruction is also expected. Additional departmental information is available on our website: <http://www.math.wisc.edu> Applicants should send a completed AMS standard cover sheet, a curriculum vita which includes a publication list, and brief descriptions of research and teaching to: **Hiring Committee, Dept. of Mathematics, University of Wisconsin-Madison, 480 Lincoln Drive, Madison WI 53706-1388.** Applicants should also arrange to have sent to the above address, three to four letters of recommendation, at least one of which must discuss the applicant's teaching experiences and capabilities. Review of applications will begin on November 14, 2003. Applications will be accepted until the positions are filled. The Department of Mathematics is 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.

WAYNE STATE UNIVERSITY – DEPARTMENT OF MATHEMATICS – One tenure-track position at the rank of Assistant/Associate Professor in any area of specialization. Persons active in research in the field of Analysis or Statistics and with the capacity to collaborate with the current faculty are especially encouraged to apply. Applications from female and minority candidates are particularly encouraged. There is also the possibility of visiting positions for 2004-2005 in any area of mathematics. A Ph.D. in Mathematics or Statistics and a strong interest in research and teaching is required for all positions. Applications should include a signed, detailed vita, description of current research interests, and four letters of recommendation, including one addressing teaching. Solid evidence of excellence in teaching at the undergraduate level is preferred over a statement of teaching philosophy. Mail applications to: **Lowell J. Hansen, Chair, Wayne State University, College of Science, Department of Mathematics, Detroit, Michigan 48202.** Inquires into the position may call (313)577-2479 or fax (313)577-7596 Applications received by December 1, 2003 will be given priority. Wayne State University is an equal opportunity/affirmative action employer. Wayne State University - People working together to provide quality service. All buildings, structures and vehicles at WSU are smoke-free.

WILLIAMS COLLEGE – DEPARTMENT OF MATHEMATICS AND STATISTICS – Tenure-track position - The Williams College Department of Mathematics and Statistics invites applications for one tenure track position in statistics, beginning fall 2004, 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 24 and will continue until the position is 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 minorities. For more information on the Department of Mathematics and Statistics, visit <http://www.williams.edu/Mathematics>.

YALE UNIVERSITY - DEPARTMENT OF MATHEMATICS - Josiah Willard Gibbs Instructorships/Assistant Professorships - Offered to men and women with the doctorate who show definite promise in research in pure mathematics. Applications from women and members of minority groups are welcome. Appointments are for two/three years. The teaching load is kept light to allow ample time for research. This will consist of 3 one-semester courses. Part of the teaching duties over the term of the appointment may consist of a one-semester course at the graduate level in the general area of the instructor's research. Grant Amount: The 2004-2005 salary will be at least \$52,800. Deadline: January 1, 2004. Application information: Inquiries and applications can be obtained at the following website <http://www.math.yale.edu>. Inquiries and application supporting documents should be sent to the **Gibbs Committee, Department of Mathematics, Yale University via e-mail: gibbs.committee@math.yale.edu.** Yale University is an Affirmative Action/Equal Opportunity Employer.

YORK UNIVERSITY – DEPARTMENT OF MATHEMATICS AND STATISTICS – NSERC University Faculty Award - Applications are invited for an NSERC University Faculty Award, at the Assistant Professor level in the Department of Mathematics and Statistics to commence July 1, 2004. Applications in the areas of Actuarial or Financial-Mathematics, Mathematical Analysis, or Statistics will be considered. The successful candidate must have a PhD and is expected to have a proven record of research excellence, and superior teaching ability. For the Actuarial or Financial Mathematics position, the candidate must have the background to teach and advise students in the department's actuarial program, and preference will be given to candidates who will contribute to existing areas of strength within the department. For the Analysis or Statistics position, preference will be given to candidates who can strengthen existing areas of present and ongoing research activity. All positions at York are subject to budgetary approval. The UFA selection process will begin September 22, 2003. Applicants should send resumes and arrange for three letters of recommendation (one of which should address teaching) to be sent directly to: **UFA General Search Committee, Department of Mathematics and Statistics, York University, 4700 Keele Street, Toronto, Ontario, Canada M3J 1P3** Fax: 416-736-5757 Email: ufa-gen.recruit@mathstat.yorku.ca www.math.yorku.ca/Hiring The UFA program is directed to women and aboriginal peoples. York University is an Affirmative Action Employer. The Affirmative Action Program can be found on York's website at www.yorku.ca/acadjobs or a copy can be obtained by calling the affirmative action office at 416-736-5713. All qualified candidates are encouraged to apply; however, Canadian citizens and Permanent Residents will be given priority.

Association for Women in Mathematics
2003/2004 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
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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.....	<i>For NEW Individual members: JOIN at the reduced rate of \$30.00 for the 03/04 membership year [valid thru 6/30/04]</i>	\$ 50	_____
2ND FAMILY MEMBERSHIP.....		\$ 30	_____
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CONTRIBUTING MEMBERSHIP.....		\$100	_____
RETIRED or PART-TIME EMPLOYED MEMBERSHIP (circle one).....		\$ 25	_____
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ALL FOREIGN MEMBERSHIPS (INCLUDING CANADA & MEXICO).....	FOR ADDITIONAL POSTAGE ADD	\$ 8	_____
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<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	_____
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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

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