AWM
ASSOCIATION FOR WOMEN IN MATHEMATICS

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PRESIDENT'S REPORT

We are thrilled to announce the upcoming publication of **Complexities: Women in Mathematics**, Bettye Anne Case and Anne Leggett, editors. This fascinating volume about experiences of women around the globe contains highlights from the AWM *Newsletter* over the past thirty years as well as many new articles, some autobiographical, some looking forward into the next century. The book will premier at the Joint Mathematics Meetings; you may view it at the Princeton University Press booth. Our congratulations and deep appreciation to Bettye Anne and Anne for their tremendous effort in bringing this book to fruition.

The Institute for Mathematics and its Applications (IMA) and the AWM are holding a **workshop, "Career Options for Women in Mathematical Sciences,"** February 4–6, 2005, at the IMA on the University of Minnesota campus. This workshop will focus on professional opportunities for mathematical scientists in industry and government and suggest strategies for developing a thriving career. The workshop is geared primarily towards graduate students and Ph.D.'s in the early stages of their postgraduate careers, but should be valuable for researchers at all stages of professional development. For further information, please see page 13.

What's happening at the January Meetings? Professor Lai-Sang Young, Courant Institute, will deliver the 2005 Emmy Noether Lecture, "From Limit Cycles to Strange Attractors."

The AWM and the National Association of Mathematicians (NAM) are co-sponsoring a two-part panel on "Achieving Diversity in Graduate Programs." "Part I: The Challenge to Retain Women" is being organized by Sylvia T. Bozeman, Spelman College, and Suzanne M. Lenhart, University of Tennessee, and will take place Wednesday afternoon, while "Part II: The Challenge to Retain Underrepresented Groups," to be held on Saturday morning, is being organized by Nathaniel Dean, Texas Southern University, and Rhonda J. Hughes, Bryn Mawr College. We are very pleased to collaborate with NAM in addressing this central issue.

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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 and girls to study and to have active careers in the mathematical sciences. Equal opportunity and the equal treatment of women and girls in the mathematical sciences are promoted.

The *Newsletter* is published bi-monthly.

The Editor welcomes articles, letters, and announcements.

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Prior to the panel on Wednesday, please join us in honoring the winner, runners-up and honorable mentions of the Alice T. Schafer Prize for Excellence in Mathematics by an Undergraduate Woman. The recipients of this prize are likely to be eventual leaders in the profession, and it is a great pleasure to honor their accomplishments. The Schafer Prize itself and the Louise Hay Award for Contributions to Mathematics Education will be awarded at the Joint Prize Session.

After the panel, please join us for a short business meeting. We anticipate that among the items to be discussed will be some important changes to the AWM's bylaws. Afterwards, share your ideas with us at "Focus: Future," moderated by Helen Moore, member of the AWM Executive Committee and chair of the Long Range Planning Committee. "Focus: Future" is an opportunity to discuss ideas for programs, suggest issues that you would like to see the AWM address, or bring up anything else that you would like to be considered in our long range planning. (See also p. 18.)

Following the Gibbs Lecture, come join the lively crowd at the AWM reception.

The AWM Workshop for Graduate Students and Recent Ph.D.'s on Saturday will include research talks, a poster session, and a panel addressing issues concerning launching a mathematical career. All are invited. This year's workshop is being organized by Dawn Lott (Delaware State University), Claudia Polini (Notre Dame), and Judy Walker (University of Nebraska).

If childcare issues have made it difficult for you to attend the Joint Mathematics Meetings in past years, please take note of the excellent onsite **childcare** program being offered by the Joint Mathematics Committee of the AMS and MAA this year. You will find more information and registration forms at www.ams.org/amsmtgs/2091_daycare.html. I hope you will help spread the word about this wonderful service.

The American Mathematical Association of Two-Year Colleges (AMATYC) annually sponsors a Student Math League Math Competition for two-year college students. The AWM is delighted to honor the top scoring woman in each region. We congratulate DI LUO (Northeast), KATHERINE WU (Mid-Atlantic), XIAOJUAN LI (Southeast), SHIVANI AGRAWAL and JENNIFER FREITAG (Midwest), ANGELA FORREST (Central), HILLARY BURGESS (Southwest), SHILE ZHANG (Northwest), and JEONG MIN SEONG (West). Seong ranked third nationally and Zhang ranked tenth nationally among all students taking the exam. We will honor these women at AMATYC's 30th Annual Conference in November.

Congratulations to TAMARA KOLDA on being selected to receive the distinguished Presidential Early Career Award for Scientists and Engineers. An applied mathematician and computational scientist at Sandia National Laboratories in California, Tammy is one of only 57 young scientists to be honored with this award. It is a special pleasure to see this award go to a woman who has served the AWM with such talent and

dedication. In addition to serving on numerous committees, Tammy developed AWM's award-winning website and served as our first web editor. (See also pp. 18–19.)

Please note the following deadlines: January 26 for applications for the AWM Workshop for Women Graduate Students and Recent Ph.D.'s to be held at the SIAM Annual Meeting in July 2005; February 1 for travel grants, mentoring grants, and Michler Collaborative Research Grants; and February 4 to apply for support to hold Sonia Kovalevsky High School Mathematics Days. See awm-math.org/calendar.html and this newsletter for more information on all these programs. As announced in the September–October issue, we are extending the **Michler Collaborative Research Grant** program (originally intended to be offered for only one year) due to the significant interest in the program. The deadline for nominations for the 2006 Louise Hay Award has been moved to April 30, 2005, in contrast to the fall deadline in previous years.

I look forward to seeing many of you in January.

Carolyn Gordon

Carolyn Gordon
Dartmouth College
October 1, 2004

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 $12 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.

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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.

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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

SIAM Workshop, July 2005:
January 26, 2005

NSF-AWM Travel Grant: February 1 and May 1, 2005

Mentoring Travel Grant: February 1, 2005

Michler Collaborative Research Grant:
February 1, 2005

Sonia Kovalevsky High School Mathematics Days: February 4, 2005

Hay Award, January 2006: April 30, 2005

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KOREAN WOMEN IN MATHEMATICAL SCIENCES

Kyewon Koh Park, President, KWMS

The inaugural meeting of the Korean Women in Mathematical Sciences (KWMS) took place June 21–23 at the Korea Institute for Advanced Study, Seoul, Korea. Though we recognized the need for such an organization over ten years ago, it was only this past fall when a few of our members took it upon themselves to make KWMS a reality. For the time being we have included sciences other than mathematics such as physics and statistics in which very few women work in hopes that they will join us temporarily and eventually form organizations of their own.

To celebrate our first meeting, we organized an international workshop featuring many guest speakers such as Jane Hawkins (UNC, Chapel Hill) and Lynne Walling (University of Colorado). The workshop also included six young Korean woman mathematicians who are working abroad. Besides the invited talks, we ran special parallel sessions and a two-hour long panel discussion, "Women's Role in Mathematics." We were very impressed with the quality of both the mathematics and the presentations given by these young female mathematicians.

During the banquet dinner on the opening night of the workshop we heard short speeches from three candidates for the presidency of the Korean Mathematical Society (KMS). We were very happy to hear that all three were concerned about the state of women in mathematics and promised increased visibility of women in KMS in the future.

Before the workshop many people, both men and women, asked us why we would like to have a workshop especially for women. By the end of the workshop, however, the answer to these questioners was clear to all of us. Many of the participants had never before attended a KMS meeting or met so many female colleagues. Gathering together allowed us to feel a sense of solidarity and served as inspiration to many young female mathematicians. All of the participants considered the workshop a huge success, and we all hoped to hold another one soon. We also hoped that the media coverage of the event would raise awareness of women in mathematics and result in the hiring of more female mathematicians in the future. In fact, we already see the effect of our meeting this fall.

There are no exact statistics on the status of Korean women in mathematics yet, but as far as we know fewer than 10% of the mathematics university faculty are women. This number only seems more shocking when we consider that 30% of mathematics Ph.D.'s and about 50% of undergraduate mathematics majors are women. Although the figures for employment seem dismal, they have

improved for women in mathematics in the past couple of years due to assistance from the government in encouraging universities to hire women. This progress has, however, been very slow, and to this day there are many schools with no female math professors to serve as role models for the growing numbers of female mathematics students.

We would like to thank AWM for the letter of support which was read during the inaugural meeting. The letter is also on our website, www.kwms.or.kr. For now it appears only in Korean.

CHILDCARE AT THE JMM

The American Mathematical Society and the Mathematical Association of America will be offering childcare services for the Atlanta Joint Mathematics Meetings to registered participants.

Childcare will be offered through KiddieCorp Children's Program. KiddieCorp has been providing high quality programs for children of all ages at meetings throughout the United States and Canada since 1986. Read all about them at http://www.kiddiecorp.com/.

The childcare services provided at the JMM are for children six months through twelve years of age. Space per day will be limited and is on a space-available basis. The dates and times for the program are January 5–8, 2005, 8:00 A.M. to 5:00 P.M. each day. It will be located at the Hyatt Regency Atlanta in Atlanta, GA. KiddieCorp can arrange meals for a fee, or parents can be responsible for meals for their children.

The registration fee is $25 per family (nonrefundable). The additional cost will be $8 per hour per child or $6 per hour per child for graduate students. These reduced childcare rates are made possible by the AMS and the MAA. Parents must be registered for the JMM to participate. Full payment is due at the time of registration with KiddieCorp. The deadline for registering is **December 8, 2004**.

This program is being offered on an experimental basis for the 2005 Atlanta meetings. Its reception at this meeting will help determine the possibility of future programs. For further information and to register, go to http://www.ams.org/amsmtgs/2091_daycare.html.

MATH/ SCIENCE NETWORK

Teri Perl, President of the Board, Math/ Science Network, Mills College

The Math/Science Network is celebrating its 30th anniversary on November 14, 5:30–9:00 P.M., Lawrence Hall of Science, Berkeley, CA. Join us as we celebrate 30 years of a job well done!

The Math/Science Network's basic mission is to spotlight the importance of mathematics education to the growth of equity for women in the fields of science, technology, engineering and mathematics. Over its impressive 30 year history, the Math/Science Network's program and EYH conferences have influenced over 625,000 young women to recognize the value of electing math courses in high school in order to maximize their career choices in college.

The Lawrence Hall of Science is a most appropriate site for this celebration for several reasons. It was there that some of the earliest activities and meetings of the Math/Science Network took place, even before the organization and its mission had been formally created. The Hall is also where an important spin-off of the early meetings, the EQUALS program, is still situated. This event will reunite many early founders of the Math/ Science Network and provide the opportunity for all to reunite with networkers from several eras.

The program includes a light buffet dinner, beverages, a movie with scenes from EYH conferences over the years, and the opportunity to meet the young new EYH Ambassadors and learn about this exciting new program funded by The Genentech Foundation in honor of our 30th year. Entertainment will be provided by The Physics Chanteuse. Additional information on ordering tickets on or off line is available at the Math/Science Network website at www.expandingyourhorizons.org, or call the Network office at 510-430-2222.

If you're likely to be anywhere near the San Francisco Bay area this November, please join us!!

MATHEMATICS EDUCATION OF TOMORROW

In January 2004, Professor Bozenna Pasik-Duncan received the AWM Louise Hay Award for Contributions to the Mathematics Education for her broad and inspiring vision of mathematics as a discipline and as a profession, and for her remarkable skill and commitment in carrying out the role of a professional mathematician in a wide variety of communities and settings. For a bio of Pasik-Duncan, see the March–April 2004 issue of this newsletter or www.awm-math.org/hayaward/2004.html. The text of her lecture given on August 14 at the 2004 MathFest in Providence, RI follows.

I would like to thank Carolyn Gordon, the President of the Association for Women in Mathematics for her kind introduction.

This lecture is delivered in the memory of Louise Hay—teacher, scholar, administrator and human being. Moreover, it is dedicated to scholars who teach introductory mathematics courses, in particular, to those scholars who teach honors calculus courses.

Through this talk, I hope you will learn that what I call Mathematics Education of Tomorrow is a collaborative effort integrating scholarship, teaching and learning. This collaborative effort needs to include K–12 teachers, students and scholars. We need to work together as partners who are all learners in the process of math education.

At this MathFest meeting and at many talks that I have attended, I have learned that many of you have important roles in the teaching and learning process. What I want to talk about today is how I put all of these pieces together in one controlled system that has been working well in my Stochastic Adaptive Control Group at KU. I call it a controlled system and I, as a scholar and teacher, will play the role of controller.

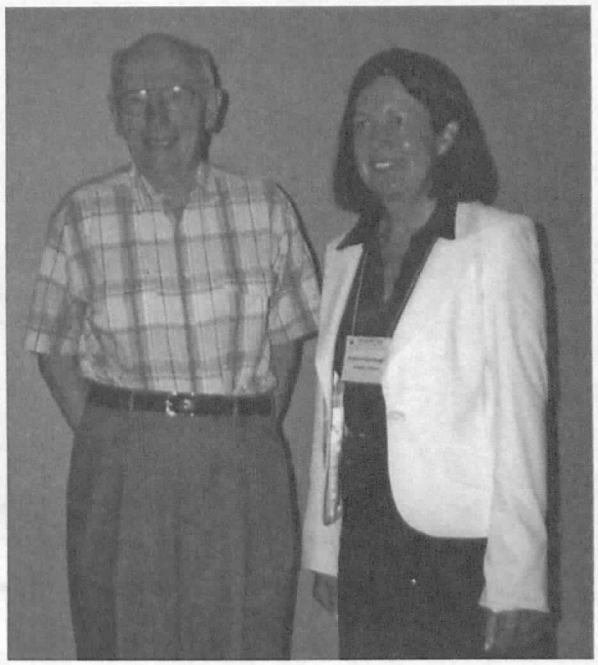
Since we need to know the controller that we will be using in our system, let me start by describing my education and research background. I am proud of being broadly educated; my academic background ranges from Numerical Analysis through Stochastic Processes to Stochastic Adaptive Control and includes a formal pedagogical training component. My research passion for the past twenty years or so has been adaptive control of stochastic linear and nonlinear systems. The general approach to adaptive control exhibits a splitting, or separation, of identification and adaptive control. Industrial models can be often described as controlled systems. The system's behavior depends on the parameters, and the fact that the values of the parameters are unknown makes the system unknown. Some crucial information concerning the system is not available to the controller, and this information should be learned during the system's performance. The described problem is the basic problem of adaptive control. The system can be described by a stochastic differential equation or a partial differential equation. The solution to the adaptive control problem consists of showing the strong consistency of the family of estimators of an unknown parameter and the self-optimality of an adaptive control that uses the family of estimates. The disturbance or what we call a noise in the system is modeled by a Brownian motion or more generally by a fractional Brownian motion (more accurate for recent problems in telecommunication, finance or biomedicine).

The beauty of this area of research lies in its use of many different areas of mathematics: from functional analysis through stochastic processes, stochastic analysis, stochastic calculus of a fractional Brownian motion, stochastic partial differential equations, stochastic optimal control to methods of mathematical statistics, as well as current computational methods in stochastic differential and partial differential equations. Let me describe the concept of an adaptive control using an investment model with transaction fees. Consider a model where an investor has free choice in investing in two assets, a bond with a fixed rate of growth or a stock whose growth is governed by a Brownian motion with unknown drift and variance. The investor controls his asset by transferring money between the stock and the bond. The control variable is the total amount of money transferred from the stock to the bond. The bond is governed by the differential equation and the stock is governed by a stochastic differential equation. The goal is to find the optimal control so that the expected rate of growth is maximized. The identification problem is to estimate the unknown parameters, the drift and variance, based on the available observations. The adaptive control problem is to construct the (certainty equivalence) adaptive control as a function of the state and the current estimate.

Let me describe now our teaching and learning process. It is both vertical and horizontal. Vertical integration incorporates students and researchers at different levels in their teaching and learning approach. It involves and engages K–12, undergraduate, graduate and postdoctoral students. Horizontal integration incorporates faculty from various disciplines in the teaching of a course. The classroom forms a system. It is stochastic because there is a lot of randomness in the classroom. Students talk, fall asleep or bring a baby to the classroom (as happened recently in one of my calculus classes for non-math-major students). What would you do? I cannot very well tell the mother to take her baby away. As a controller I make a quick decision. I decided to teach the baby, who was roaming around on the carpet in front of me while his mother was focused on learning and taking notes from the blackboard. I believe that the baby will be a great mathematician. At the age of seven months he learned some calculus! Having that baby in my class has become symbolic for my teaching. I enjoy explaining math concepts or my research to people who are not mathematicians or who have never even learned mathematics. I teach students to do the same.

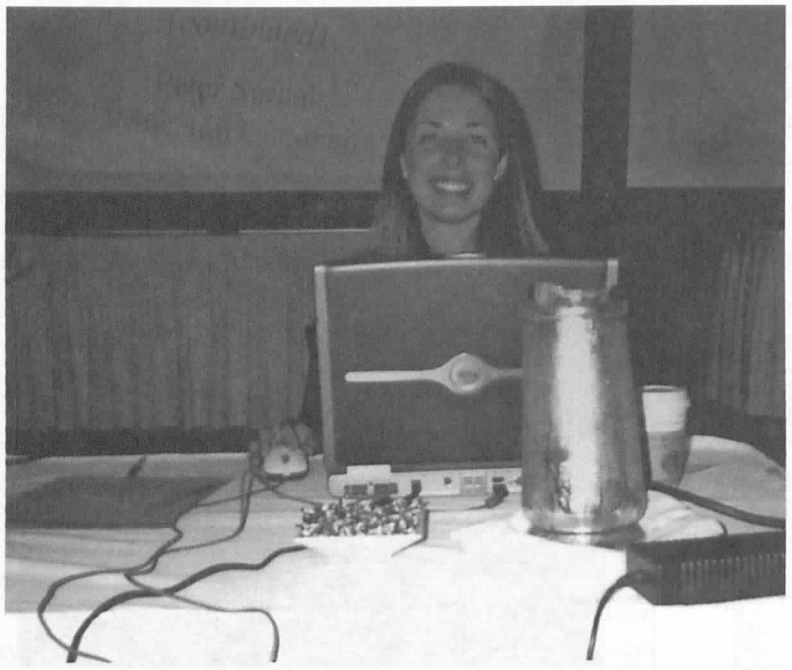
In systems theory, we analyze every system carefully. We analyze the existence of a solution and computational aspects of it, we simulate stochastic equations, we collect information, we compose results, etc. We do the same in our teaching. I like to treat a classroom as my scientific laboratory. I collect information. As I introduce myself, I ask the students to introduce themselves. We as teachers need to know the students and their interests. This information is important when we design projects for them. There are many unknowns in this system, so we need to estimate (learn) them as in the theory, and at each instant a controller/teacher uses this new estimate in control strategies and adapts the system. In theory this is called adaptation. It is the same in teaching. We collect information, we build a portfolio, we analyze our reports and data after every class, and we also want to do better each time so that in the long run we will do as well as if we knew the system perfectly. In the theory of stochastic adaptive control, this property of adaptive control is called self-tuning.

As you can see this method of teaching is called scholarship in teaching. We treat teaching as a stochastic process that changes over time, a process with several components such as vision, design, data collection and data analysis. We integrate teaching and learning. As in the theory, the controller has to learn, so a teacher, as a controller, has to learn too, and the system has to learn, meaning the students have to learn. In control theory, we love feedback control. In teaching, we love feedback from students. For example, a student who graduated last May who got her "dream job" at the Mayo clinic says:



Bozenna Pasik-Duncan with Wendell Fleming (Brown University) after her talk

> My job is going well. I get to work on research projects that couldn't be done at most hospitals. Mayo is at the forefront of new technologies and techniques, the doctors see many patients with rare diseases to study, and they have extensive medical records to work from that go back to the early 1900's! At least once a week, I get to meet with an investigator to discuss their research or results that I have obtained. Working is a big change from school, since now the sets of data are much larger and much more complicated than anything you'd find in a textbook. I have learned a lot in just under two months. I'd like to mention that I'm glad that you had people from other departments come and speak with us during seminar and AWM meetings. When I meet with investigators, they don't talk about math. They talk about genetics, anesthesiology, surgery, cancer, technology, etc. It's important to be able to understand other subjects so that you can thoughtfully apply mathematics to them.



Dominique Duncan, University of Chicago, helping her mother at the talk

We learn from this feedback that collaborative efforts in research and collaborative efforts in teaching are important. Communication and writing are equally important, so we need to be sure that we teach students how to communicate and how to write. We need to be sure that our graders will grade students' papers the way we review papers for professional journals. We make comments and corrections with the highest respect for the authors, and we expect our graders to do the same. This isn't the place for comments like "what is this?" It is important to engage students in the voyage of learning. I like the following quote of Marcel Proust: "The voyage of discovery lies not in finding new landscapes, but in having new eyes."

It is rewarding to bring someone who works in probability to your calculus class when you give an example of an integral as the expected value of a random variable. Students like visitors, and a probabilist will give them real world problems and will relate them to his own research. I use the language of my research freely. When I teach calculus, I make connections to stochastic calculus, an area of my research. Making connections has been fascinating. When I talk about curvature in calculus or if I talk about random processes in stochastic analysis, I bring my research collaborators from the KU Medical Center, from Flint Hills Scientific LLC, KU Business School and Economics Department, from KU Information and Telecommunication Technology Center, from Sprint Corporation or from the Music Department. Collaborators from the medical center talk about epilepsy and seizures, and they show brain waves and explain how you can use a curvature concept to predict seizures. However, because most people have never experienced an epileptic seizure, they have no feel for these graphs. The musicians can modify a Mozart sonata by adding a noise in the orchestra, duplicating the frequency behavior in powerful ways. If you bring your research collaborators, especially those from other countries, to your classroom with good preparation for their visits, this changes students' perspectives. It opens their eyes and it wakes up their imagination and creativity. They see how math can be found everywhere and how often it is hidden. They see the role of the broad and inspiring vision of mathematics. They see the power, beauty and excitement of the cross-boundary nature of math, and this is what they write in their reflections from the classroom:

> Taking this class really opened my eyes to math. Instead of dreading and avoiding math, I love it. She teaches until we know what is going on and not to follow a schedule.... She taught us statistics with a true passion for the subject. She taught us how practical it is in life and how relevant it is for any field of study we choose.... I learned from the material, learned from myself, and for it all, my life is better. A course with that kind of an impact and outcome is definitely life changing.

By sharing with students your research collaborators, in particular, those from other countries, other cultures, we show what roles professional mathematicians play in a wide variety of communities and settings. We organize Workshops on Control for High School Teachers of Math and Science and Students at all major control conferences. They are sponsored by the NSF and the Control Systems Society, American Automatic Control Council and International Federation of Automatic Control. We organized them in Chicago, Denver, Las Vegas and Maui. The number of participants grows exponentially. The last one was held for 300 students. The

request was for 1,000. Next year will be very busy with workshops in Oregon, Cyprus, Czech Republic, Spain and later in California and New York. The speakers are outstanding national and international control researchers who are also outstanding teachers. They are excited about sharing their love for research, about showing middle and high school students that control is everywhere, and they pass the message that to know and understand control well they need to know math well.

We go filled with our excitement and love for math to local schools; we invite sixth graders to the university for workshops run by our undergraduates, graduates and faculty. The University of Kansas Math Department has become a friendly place in our community. Our AWM Student Chapter builds important bridges between the KU Math Department and local schools. We build other bridges: with the Engineering and Business Schools, with the Medical School and Psychology Department as well as with the departments of economics and music. We travel everywhere around the world to visit our collaborators, and we talk with them about their research and teaching experiences, but we also send our students, including undergraduates, to international conferences and to meet students there. This has been terrific—the most successful practice. I don't need to be stressed out by having an accent. I am proud of knowing several languages. I teach Polish in all my classes as a nice break from difficult mathematical concepts. KU students travel to Poland, and as a result, I couldn't find a seat on any plane to Poland last July! I developed the reputation "with her as a teacher, math is not as difficult as that Polish…."

Our KU Stochastic Adaptive Control group of students has been very successful in getting jobs in industry ranging from financial companies and international banks through actuarial and telecommunication companies to biomedical research institutions. They are good citizens, and they are important contributors to real world problem solving. They are involved in interdisciplinary research. They serve as important advisors to KU students: "Always be alert in your analysis of what you are doing—ask yourselves why things are the way they are—see if you can explain what you observe. Make sure that you consider how even the most abstract mathematics you do can be applied to real life problems."

Let me finish my talk by challenging you. Since this talk is sponsored by AWM, and since my daughter just

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 **February 1** and **May 1, 2005**. *Please note that funds are pending for the May 1, 2005 cycle.*

finished the first year of the undergraduate math program, I ask each and all of you to encourage first year female students to stay in math by showing them that math will take them everywhere. As I always say, they can be better lawyers if they know math well. I consider losing a female student in a first year honors calculus or in any honors calculus as a personal failure.

Thank you for giving me the opportunity to share with you my passion, enthusiasm and love for teaching, learning and doing research. Teaching, learning, collaborating, and making connections with probability and stochastic modeling make me the happiest person on this planet.

Big thanks go to: AWM, MAA, KU Stochastic Adaptive Control Group and KU Students, NSF, KU Mathematics Department, Control Systems Society, my collaborators: KU Medical Center Flint Hills Scientific LLC, KU Business School, and KU Information and Telecommunication Technology Center. Special thanks go to: Dominique Duncan, University of Chicago and Tyrone Duncan, KU Math Department; Mary Klyder, KU Honors Program; Daniel Bernstein, KU Center for Teaching Excellence; and Mary Jane Dunlap, KU University Relations.

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COLLABORATIVE RESEARCH GRANTS FOR WOMEN

Dedicated to the memory of Ruth Michler

AWM will continue to offer Collaborative Research Grants 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.) We anticipate offering one or two grants for amounts up to $2500 in 2005. Each grant may be used to 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. All travel must be completed within one year of the award. For foreign travel, US air carriers must be used (exceptions only by prior approval from AWM).

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

An application should consist 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. A final report will be required from each awardee. Awards will be determined on a competitive basis by a selection panel consisting of distinguished mathematicians appointed by the AWM.

Send *five* complete copies of the application materials (including the cover letter) to: Collaborative Research Grant Selection Committee, AWM, 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 1, 2005**; applications via email or fax will not be accepted.

MEMOIR: OL'GA ALEXANDROVNA LADYZHENSKAYA

Cathleen Synge Morawetz

On the night of January 12, 2004, Ol'ga Alexandrovna Ladyzhenskaya died in Petersburg, Russia. She was planning to leave the next day for Florida State University where she had been a welcome visitor last year. Professor Ladyzhenskaya was eighty-one, and her career in mathematics spanned over sixty years and included the publication of several landmark books and monographs as well as 234 papers. Despite formidable difficulties with her sight she was doing mathematics until the day she died. Her major work was devoted to elliptic and parabolic equations and particularly to the Navier-Stokes equations.

But here I would like to write of her from the viewpoint of my friendship and admiration for her and, despite the fact that she would not have liked it, as a woman who overcame difficulties unimaginable to us in the West and will be remembered as one of the half dozen women mathematicians who made their mark in a field which is still today mainly the profession of men.

Ol'ga Alexandrovna was born in Kologriv, the youngest of the three daughters of Alexander Ladyzhenskii. The Ladyzhenskii family were of ancient and noble descent. Alexander was the nephew of Genady Ladyzhenskii, one of the founders of the Odessa School of the Arts and a famous water-colorist who died before the Revolution. Alexander was a teacher of mathematics and art in the high school in Kologriv. In 1937, when Ol'ga was sixteen, Alexander was denounced by a fellow citizen of Kologriv and arrested. The great Stalinist purges were at their height in the mid-thirties and Ladyzhenskii, like many others, was shot by the authorities on some trumped-up charge. It was years before the family learned the full story, and he was finally exonerated after the death of Stalin. But his two older daughters, both in high school, were expelled. Ol'ga, on whose education her father had lavished particular attention, was allowed to stay in school. But in 1939, when she applied to the University of Leningrad, she was denied admission as a daughter of an "enemy of the people." However, she succeeded in being able to study for two years at a pedagogical institute in Leningrad—the war ended that, and in 1942 she went back to Kologriv to teach mathematics in the high school.

In 1943, fortune smiled and, despite her family history, she was admitted to study mathematics at the University of Moscow. Two very brilliant woman mathematicians were there: Ol'ga Ladyzhenskaya and Olga Oleinik. One cannot help wondering whether the severe losses on the battlefront had depleted the supply of male students so that women were more welcome. For both of them it was a wonderful new world. There were the seminars of Petrowski and later Gel'fand and Vishik. But it was not all plain sailing for Ladyzhenskaya. She was not allowed to defend her advanced thesis, completed in 1949 with Petrowski, for several years, and it was not published until 1952. Some of these early results on a new approximation scheme for PDEs based on discrete Fourier analysis appeared in the end at the same time as those of von Neumann, tough competition.

I first heard about Ol'ga Alexandrovna from Lipman Bers, in the early fifties. In 1958 my husband, Herbert, met her in Leningrad and was captivated by her charm, beauty, and intellect. She wanted very much to know what her mathematical idol, K. O. Friedrichs, a close friend of ours, was like. I met her around 1960, but we became friends in 1963 when I spent a month in the Soviet Union.

Unlike other Russians that I met at that time, she brought me to her home and we talked very freely. She told me of her adversities and about her father, introduced her mother, and showed me a beautiful painting by her greatuncle. We talked not so much about mathematics but about life. By then, she had a well-established position at the Steklov Institute in Leningrad and was internationally renowned. When I visited other institutions in the Soviet Union she was often the subject of conversation. The world of science was in fact divided, some finding her an heroic fairy tale figure and others thinking she had too many complaints. In the last analysis, I admired her for her enormous courage, for the way she had overcome her difficulties as well as for her great and profound mathematical contributions.

Mathematics was her lifeblood. Her output was prodigious. Many of her best discoveries coincided with or anticipated those of others, as had happened with her thesis. It was no surprise to learn from Vitali Ochkur that in the weeks before she died they had been working together on some new geometric ideas.

Ol'ga Ladyzhenskaya in Ames, Iowa, 1998
(Photo courtesy of Max Gunzburger)

Ol'ga's family life was centered on her two sisters, their children, and their grandchildren, and a great deal of her thoughts and efforts were directed toward them. Throughout her life, Ol'ga helped and fought for many people: for Jews who lost their jobs after they applied to emigrate, for many individuals in trouble with the Soviet regime. She assisted in guarding the manuscripts of Solzhenitsin at considerable personal risk. Her own history did not make her careful for herself.

After 1963 we met many times, but I have lost track of when and where. Much of her life her travel was restricted because of her controversies with the regime. But in the early seventies I met her at a meeting in the Polish countryside. She gave a brilliant talk on fluid dynamic stability, broadening the subject from earlier linear analysis. This was to be part of her great work on the Navier-Stokes equations. It was a special treat for her to be in Poland, and she went off frequently to nearby Warsaw on various missions for those who could not travel at all. The worst restrictions on travel came in the late sixties after the Soviet invasion of Czechoslovakia. I did visit her twice more in the Soviet Union, and she came to New York as often as possible, the last time a little over a year ago. She had many collaborators abroad. In the last ten years of her life she initiated some new approaches to attractors for nonlinear partial differential equations. Some of this work was done in Heidelberg as the guest of Willi Jaeger.

She never to my knowledge contemplated emigrating after that became easy. She was much too devoted to Russia, although she was saddened by the restlessness and upheaval of the nineties and the decline in the Russian population. Still she remained hopeful for the future.

Ol'ga Ladyzhenskaya will remain in our memories forever as a great figure from twentieth century mathematics and a woman of overwhelming character, beauty and achievement.

AWM GRANT RECIPIENTS

AWM congratulates recent collaborative and mentoring travel grant recipients. The mentoring grants were funded by the NSF, while the collaborative grants were funded by the University of North Texas and the NSF through Ruth Michler's POWRE grant.

Collaborative Research Travel Grants: October 2003: CHRISTINE ESCHER, Oregon State; K. RENEE FISTER, Murray State; ERICA FLAPAN, Pomona College; and VIVIEN G. MILLER, Mississippi State; February 2004: ALICE DEAN, Skidmore College; AIHUA LI, Loyola University of New Orleans; and JULIANNE RAINBOLT, Saint Louis University; May 2004: MARLIES GERBER, Indiana University; AIMEE S. A. JOHNSON, Swarthmore College; and TONG LI, University of Iowa.

Mentoring Travel Grants: February 2004: CATHERINE BENETEAU, Seton Hall University; ANDA DEGERATU, Duke University; KATHLEEN FOWLER, Clarkson University; MIAO-JUNG YVONNE OU, University of Central Florida; BEATRICE RIVIERE, University of Pittsburgh; SARAH A. SPENCE, Franklin W. Olin College of Engineering; ELIZABETH A. STANHOPE, Willamette University; MIRANDA IJANG TEBOH-EWUNGKEM, Lehigh University; KATHERINE THOMPSON, Carnegie-Mellon University; and HAOHAO WANG, Southeast Missouri State University.

IMA-AWM WORKSHOP

The Institute for Mathematics and its Applications (IMA) in cooperation with AWM is hosting a workshop, "Career Options for Women in Mathematical Sciences," February 4–6, 2005, at the institute at the University of Minnesota. This workshop aims to familiarize women in the mathematical sciences with professional opportunities for mathematical scientists in industry and government labs and to suggest strategies for not merely surviving, but thriving. The workshop is geared primarily towards graduate students and Ph.D.'s in the early stages of their postgraduate careers, but should be valuable for researchers at all stages of professional development. Invited speakers, panelists and discussion leaders are women in research and management positions in industry and government labs and women in academia with strong industrial ties.

Limited funds are available through the IMA for supporting the travel and lodging of participants. For further information or to apply for participation, contact staff@ima.umn.edu or check www.ima.umn.edu/cwims on the IMA website.

AWM AT SIAM

AWM thanks the workshop organizers, Suzanne Lenhart, K. Renee Fister, and Maeve L. McCarthy, who also wrote this report.

AWM had a variety of activities at the SIAM Annual Meeting, July 12–16, in Portland, Oregon. We are delighted and appreciative that SIAM continues to include our activities as an integral part of its meeting.

The AWM workshop was held July 12–13 and opened with a luncheon for the participants and mentors and a few distinguished guests. Doug Arnold, Director of the Institute for Mathematics and its Applications, gave a short talk about the opportunities at that institute at the University of Minnesota.

The first postdoc minisymposium, "Mathematical Biology," was held Monday afternoon and completed the activities of the SIAM Conference on the Life Sciences, held in conjunction with the annual meeting.

The "AWM Minisymposium on Career Questions and Potential Options" organized by K. Renee Fister and Maeve L. McCarthy was held on Tuesday, July 13th. Four women presented their perspectives on career issues and each presentation was followed by a significant number of questions and comments.

Barbara Keyfitz (University of Houston/Fields Institute), president-elect of AWM, was the first to speak; her topic was "Women in Academia: Is the Climate Chilly?" She commented on some of the reasons why women are not entering academia in the same proportions that they have been entering the private sector. Her main point was that academic leaders need to be asking different questions in order to foster the growth of women in academia.

Lisette de Pillis (Harvey Mudd College) discussed "Children versus Tenure." She described her own career path, particularly her choices regarding having children while untenured. Like many universities, HMC had no parental leave policy. De Pillis described the work involved in creating such a policy and the consequences of it.

"Career Challenges for the Female Mathematician in Academia" was the topic for Martha L. Abell (Georgia Southern University). As department chair at a regional university, Abell focused on challenges that arise in a mathematics department where teaching and service are the highest priorities. She encouraged us to look for rewarding opportunities through service to our universities and the profession.

Finally, Carol S. Woodward (Lawrence Livermore National Laboratory) spoke to us on "The Administrative Career Track: Pros, Cons, and Factors." She drew our attention to the qualities that make good managers and advised us to ask ourselves if we really have these qualities before pursuing administrative positions. Woodward then offered suggestions for reading materials and training that would help us to develop strong leadership and managerial skills.

The second postdoc minisymposium was on Tuesday afternoon and featured work on "Modeling and Numerical Methods."

AWM was represented at the SIAM poster session with seven student presenters from the workshop participants. The poster session (together with a superb dessert reception!) was on Tuesday evening. The complete listing of the participants with talk and poster titles is given below.

AWM would like to thank Cammey Cole for her help with recruiting mentors, and all the mentors: Lisette de Pillis, Mary Ann Horn, Cammey Cole, Paula Budu, Lisa Stanley and Carol Woodward. Most importantly, AWM expresses its gratitude to the Office of Naval Research and the National Security Agency for support of the workshop program.

The second annual AWM-SIAM Sonia Kovalevsky Lecture was given by Joyce McLaughlin on Tuesday afternoon. Her topic, "Interior Elastrodynamics Inverse Problems: Creating Shear Wave Speed Images of Tissue," fit in well with the themes of the meeting. The abstract for her talk read:

> The palpation exam, where the doctor presses against the skin to locate abnormal tissue, senses tissue stiffness changes. We create images of shear stiffness changes using data from Mathias Fink's transient elastography experiment. That experiment yields time and space dependent interior displacements of a propagating elastic wave using an ultrafast ultrasound based imaging technique. In this talk, we present well-posedness results, algorithms and images utilizing positions of the propagating front of the wave.

Suzanne Lenhart, representing the AWM Education Committee, gave a brief talk to the Teachers' Day Workshop on Wednesday, "Introducing the Idea of an AWM Teachers Partnership." This idea received a positive reaction from the teachers there, and the Education Committee is considering implementing such a program. Then she engaged the teachers in a rousing game of "Hex," a fun diversion that can be used with students.

AWM Minisymposium on Modeling and Numerical Methods

This minisymposium featured talks by female recent Ph.D.'s on modeling applications of mathematics, dynamics and numerical methods. The applications included relaxor ferroelectrics and transmembrane protein structure. Post-processing for the discontinuous Galerkin method and the dynamics of polygonal dual billiards

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, 2005**.

were presented.

Filiz Dogru, Grand Valley State University
On Polygonal Dual Billiards in the Hyperbolic Plane

Genetha Anne Gray, Sandia National Laboratories
An Empirical Scoring Function for the Optimal Bundling of Transmembrane Helices

Julie K. Raye, Virginia Commonwealth University
A Temperature-Dependent Model for Relaxor Ferroelectrics

Jennifer K. Ryan, Oak Ridge National Laboratory
ENO Type Stencil Choosing for One-sided Post-processing for the Discontinuous Galerkin Method

Organizer: Suzanne M. Lenhart, University of Tennessee and Oak Ridge National Laboratory

AWM Minisymposium on Mathematical Biology

This minisymposium featured talks by female recent Ph.D.'s working in mathematical models with biological applications. The applications included prion populations and leukemia drug treatment. Two talks were related to genotyping and genome comparison.

Vera Cherepinsky, Courant Institute, NYU and Yale University
Probabilistic Error Bounds with Application to Genotyping Microarray Design

Meredith L. Greer, Bates College
A Mathematical Analysis of Prion Proliferation

Seema Nanda, University of Tennessee, Knoxville
Optimal Control for Drug Therapy in a Chronic Myelogenous Leukemia (CML) model

Mariel Vazquez, University of California, Berkeley
Genome Comparison Allowing Complex Rearrangements

Organizer: Suzanne M. Lenhart, University of Tennessee and Oak Ridge National Laboratory

Research Poster Reception

AWM Poster Presentations by Women Graduate Students were part of the SIAM Poster Reception. The AWM women graduate student presenters in this session were:

Erika Asano, University of Tennessee
Optimal Control of Swinging Elements in a Parabolic Competition Model

Brandy A. Benedict, North Carolina State University
Computational Eddy Current-Based Methods in Nondestructive Damage Detection

Donna M. G. Comissiong, Northwestern University
Nonlinear Dynamics of Frontal Polymerization with Gel Effect

Sarah C. Cunningham, University of California, Santa Cruz
Biological Computation and Information Processing in Biofilms

Wandi Ding, University of Tennessee
Optimal Control of Hybrid Systems involving ODEs

Peg Howland, University of Minnesota
Application of the Generalized Singular Value Decomposition to Face Recognition

Fengyan Li, Brown University
Locally Divergence-Free Discontinuous Galerkin

NON-STANDARD CAREERS

Marion Cohen

Ginger Warfield

After a brief summer pause, we are returning to the series of mini-biographies of women mathematicians whose careers have been both satisfying and non-standard. We also return to our standard accompanying request: if you fall into this category, or know of someone else who does, please get in touch with Ginger Warfield (warfield@math.washington.edu).

We return, in fact, with a classic mathematical device: an extreme case. It would be difficult to find anything standard whatsoever about the career of Marion Cohen. On the other hand, she is indeed a mathematician, and she has found a great deal of satisfaction from being one. The fact that a lot of that satisfaction is

expressed in poetry is one of the indicators that she is not in the accustomed groove.

Marion became intrigued very early both with mathematics and with writing, and in the process with examining everything from her own particular perspective. It seems to me consistent with this combination that she should have wound up writing a thesis that was based on something she had read and been intrigued by, not on anything mathematically related to what anyone at her institution was doing. Since the work she had read was by Laurent Schwartz, she wound up writing to him and enlisting his aid, and his long-distance approval and support were responsible for her getting her doctorate.

Proceeding in this out-of-the-mold manner, she left academia, aside from occasional stints as an adjunct at one place or another, and focused on writing, notably on writing poetry. She developed a career as a writer, and published several books (including *Dirty Details: The Days and Nights of a Well Spouse*, Temple University Press, 1996). Much of her poetry is on mathematics, and it has been published in a wide variety of places, including the MAA *Monthly*. A lot of it is also on her web page, at www.mathwoman.com. At the same time, she also wrote up some mathematical results, few of which were published, which may account for the line in one of the poems in her collection, "Crossing the Equal Sign":

I am the wanderer
with a lemma in every port.

Eventually, though, she decided to get back into academia and work towards a teaching career. Unsurprisingly, this effort has not run a very smooth course. A series of adjunct positions have kept the wolf from the door, but she's in an odd place in terms of tenure, and had not (as of the point when she wrote me last spring) found a very settled spot. She has, however, kept up the blending of her interests. One piece of evidence of that is the math limericks that are inspired by the content of the courses she teaches. I think my favorite among those was the one on improper integrals:

Said a ship-shape chap from the Congo
"Since our area's infinitely long-o
it's likely that you'd
be inclined to conclude
that it's infinite big, but you're wrong-o."

BOOK REVIEW

Book Review Editor: Margaret Bayer, University of Kansas, Lawrence, KS 66045-7523,
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Mathematicians of the African Diaspora. Website of Scott W. Williams, www.math.buffalo.edu/mad/.

Sarah J. Greenwald, Department of Mathematics, Appalachian State University, Boone, NC 28608;
greenwaldsj@appstate.edu

In 1997, Scott W. Williams, a mathematics professor at the University of Buffalo, created the "Mathematicians of the African Diaspora" website: "The impetus for creating this web site was a desire to suggest modern mathematicians and scientists as images of success to present to the african american community."

The website has flourished since then. It has received numerous awards, topped the lists of related search engine results, and developed an impressive international reputation.

The site is packed with over 10,000 web pages filled with interesting history, statistics, articles, and reference lists. For example, did you know that the percentage of new black women Ph.D.'s as a proportion of all new black Ph.D.'s in the US is generally higher than the corresponding percentage for new white women Ph.D.'s? From the main index page, choose the statistics link to see statistics on black mathematicians and minority scientists. The site also contains profiles of approximately 300 mathematicians, along with pages on the history of mathematics in Africa, the greatest black mathematicians, and black women mathematicians, just to name a few.

Profiles of contemporary black mathematicians contain lists of scholarly works and published articles, which are perfect for student research projects. As Julia Bowman Robinson once said: "What I really am is a mathematician. Rather than being remembered as the first woman this or that, I would prefer to be remembered as a mathematician should, simply for the theorems I have proved and the problems I have solved."

Women and minority mathematicians should be discussed in the context of their mathematics, as advocated by Robinson, and Williams does an admirable job of

combining the history with information about the mathematics. Of course it would be wonderful if the lists of scholarly works were active links, say to MathSciNet, but a trip to the library using a profile page as a reference list works just fine.

The website is easy to maneuver, but at times there are links that do not work. Williams is always very responsive to these kinds of issues, and he quickly fixes problems that are brought to his attention. The server seems extremely stable, as I can recall only one time when my students and I were unable to connect to the site, and the problem was resolved by the next day. The site could be improved by striving to meet compliance standards for ADA accessibility.

The fluidity of the website format allows for frequent updates. While a book that contains the contents of the site would be very useful, especially because much of the information is not in print anywhere else, Williams has no such plans:

> I realized that each book is fixed, despite subsequent editions.... On the other hand, a web site can be changed as long as I have the energy. In this way even corrections can be smoothly made. For example until 2001, everyone thought one person, Boyd Granville, was the first African American woman to earn a Ph.D. (1949), when we discovered another to have done it in 1943. This means that still, all books published on the subject are incorrect.

Until recently, it was thought that Evelyn Boyd Granville, who received her Ph.D. in 1949 from Yale University in functional analysis, and Marjorie Lee Browne, who received her Ph.D. in 1950 from the University of Michigan in topological and matrix groups, were the first African American women Ph.D.'s in mathematics. When Williams was informed about the existence of an earlier Ph.D., he created a web page profile, and it is through this profile that the correction is being publicized: Martha Euphemia Lofton Haynes received her Ph.D. in 1943 from Catholic University of America; her thesis was "Determination of Sets of Independent Conditions Characterizing Certain Special Cases of Symmetric Correspondences."

At over 2,400,000 visitors to date, this ever-changing website is an invaluable resource for students and teachers of mathematics at all levels. Williams has not only succeeded in his goal of presenting successful role models to the African American community, but indeed his site has had far-reaching benefits for us all.

Correction

In the July/August 2004 AWM *Newsletter*, the book review written by Helen Moore contained an error. The book review was of *The Door in the Dream: Conversations with Eminent Women In Science* by Elga Wasserman. In the second paragraph of the review, Moore stated that three additional women have been elected to the NAS in the mathematical sciences since Wasserman did her interviews. In fact, there have been at least four additional women. One omitted by Moore was Grace Wahba, who was elected in 2000 for her work in Applied Mathematical Sciences. Moore apologizes for her error, though she's very happy that the truth is better than she thought!

A note from the editor

I don't recall whether I learned of the website under review while looking for contact information for some contributors to *Complexities: Women in Mathematics* with Bettye Anne Case, or at an earlier date. But I agree that it is a great site, and due to what we learned there, *Complexities* is a book that will indeed include the information that Euphemia Lofton Haynes is the first known African American woman to have earned the Ph.D. in mathematics.

Another website that can be enormously useful is MacTutor, the University of St. Andrew's history of mathematics pages maintained by John J. O'Connor and Edmund F. Robertson. See http://turnbull.mcs.st-and.ac.uk/history/. Cathy Kessel recently sent me the news that the website has a new feature on women graduates of British and Irish universities before 1940: there were about 2500 of them! See http://www-gap.dcs.st-and.ac.uk/~history/Davis/index.html.

At the National Academy of Sciences site, www4.nationalacademies.org/nas/nashome.nsf, members are indexed in several ways. Mathematicians aren't always where you would expect them to be; for example, Nancy Kopell's discipline is listed as Systems Neuroscience. We learn that Grace Wahba, University of Wisconsin-Madison, "is the principal developer of two important areas of statistical research: curve-fitting using splines; and generalized cross-validation, a data-based method of selecting the best estimation rule from a family of possibilities. Her widely influential work combines mathematical power with a keen eye for useful applications."

EDUCATION COLUMN

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

It is time for a long-overdue acknowledgment: since a short time after I began writing these columns for the AWM *Newsletter*, my daughter Eleanor has been improving every one. Sometimes it has been a general comment ("This sounds like a neat project, but I didn't really figure out what it was until the last paragraph"), sometimes highly specific ("Mother, no one in the world but you and Gayle Ball would actually use that word"). Always the column has emerged more focused, more readable, and altogether something I am happier to present. Be it hereby known to one and all: I am very grateful!

High School to College: The Great Transition

Some years ago in the course of a casual conversation, a friend who works with a program on campus asked me what was wrong with the mathematics department. "A lot of students come the University and flunk calculus," she said, "and these are 3.5 or 3.6 students." I was dumbfounded. I knew about the failure rate, and was only slightly jolted by her assumption that a 3.5 from an unspecified high school defines a student as automatically academically outstanding. What stunned me was her clear conclusion that the only ambiguity about the source of the difficulty was whether the mathematics department was incompetent or uncaring.

That was quite a while ago. In the intervening years a lot has happened. For one thing, our department, which not only is competent but cares a lot about its students, put a huge amount of time and energy into revising a calculus sequence whose flaws were getting in the way of its considerable strengths. For another, a communication gap became clear first to me (because of my choice of working areas) and then to a number of my colleagues: by far the most widely accepted source of information about the question: "What do the mathematicians at the University really want of their incoming students?" was our placement test. Given that this test is a slightly generic one used for all of the state's four-year colleges, that very few members of our department have even seen it, and that those who have are rarely at ease with its choices of emphasis, the gap might perhaps better be described as a chasm. On the other hand, when it came to articulating what the needs really are, conversations ranged from lively to chaotic, but were rarely productive.

I was so conscious, in fact, of how much easier it is to spin resonant prose on the subject of the ideal student than to produce useful suggestions that my first reaction when I heard of a "Transition Project" designed to improve students' transition in mathematics from high school to college was that my sky already had enough pie in it. Only after several people for whom I have a lot of respect had more or less hit me over the head with it did I begin to take the Project seriously. Eventually I wound up at part of one of its workshops, at which point I became downright enthusiastic. The working community included a lot of voices from a lot of contexts—a good balance of secondary and post-secondary, plus some folks who do assessment on the national level, and the like. There was also a lot of listening going on. From this there emerged the ideas for a document, solidly cushioned by the agreement that no document on its own was going to solve any problems.

The document ideas have now converged into a slightly skeletal draft, and my enthusiasm remains unabated. Possibly my retreat from skepticism has turned me into a Pollyanna, but it seems to me that the balance between mathematical content and other needs is unusually fine. The proposed document includes an excellent selection of topics that are important to a student entering college (and the listing is due to be fleshed out with examples of both minimal and beyond-minimal problems on each subject.) On the other hand, in terms of transition far more students crash and burn for lack of understanding of the academic expectations for a college student than for lack of any one specific chunk of content. Among the most disastrously disillusioned of college students are those who come in armed exclusively with really polished skills at carrying out whatever procedure the teacher or textbook tells them to carry out. Also subject to high distress are those who are convinced that a mathematics problem that requires more than five minutes to solve represents an unjust imposition on the part of the teacher. Both these and other similar "attributes or characteristics" are addressed in the very opening paragraphs of the transition document, and I find that very heartening. Even the mathematical

content description, which can so easily degenerate into a laundry list, maintains the emphasis by presenting "concepts and procedures the student needs to be able to select and use."

It will take some more time and energy for the draft to get fleshed out, finished and distributed. After that comes a phase that could be even tougher: getting it accepted, and making it possible for those who accept it to act on it. That will require support not just from teachers but from administrators, parents and the community at large. All were discussed at the workshop, with a variety of suggestions proposed. My own particular working subgroup looked most closely at school administrators and felt that the "Lenses on Learning" seminars produced by the Educational Development Center could be of huge benefit. Others addressed other components. No one, oddly enough, came up with the perfect solution for any of them, but a lot of good ideas got floated and recorded.

Clearly this is a work in progress. If you would like to check its current state, see www.transitionmathproject.org. Let's hope that in a few years I can do a follow-up column on its impact—we shall see!

FOCUS: FUTURE

At the conclusion of the AWM business meeting at the Joint Math Meetings, Wednesday, January 5, 2005, 4:50–5:30 P.M., members and others interested in the AWM are invited to stay and share ideas at this session organized by the AWM Long Range Planning Committee. Helen Moore, American Institute of Mathematics, will serve as moderator.

This is a chance for you to give suggestions and comments about all kinds of future (or current) activities of AWM. Topics are open, but we expect they may include: workshops and conferences, grants and prizes, participation of AWM at regional AMS and MAA meetings, joint activities with NAM and other organizations, and membership concerns. For a description of AWM's current programs, see www.awm-math.org/.

If you are unable to attend in person, your suggestions and comments may be sent in advance to moore@aimath.org.

AWARDS AND HONORS

Sandia researcher wins PECASE

Dr. TAMARA KOLDA, a researcher at Sandia National Laboratories in California, is one of 57 young U.S. scientists selected for a 2004 Presidential Early Career Award for Scientists and Engineers (PECASE), the nation's highest honor for outstanding scientists and engineers embarking on independent research careers. Established in 1996, the PECASE program is intended to recognize scientists and engineers who early in their research careers show exceptional potential for leadership at the frontiers of scientific knowledge.

Kolda received her award from the President's Science Adviser, John H. Marburger III, at a ceremony in the Eisenhower Executive Office Building. Kolda was nominated by the Department of Energy's Office of Science and was also honored by Energy Secretary Spencer Abraham in a special ceremony at DOE headquarters.

"The work of these young scientists and engineers is an excellent example of the kind of innovative and forward-looking research that our nation needs to meet the challenges of the twenty-first century," Abraham said of the award recipients. "Their work will help to contribute to our energy security and independence far into the future."

Tamara Kolda

Said C. Paul Robinson, Sandia President and Laboratories Director: "We are very proud of Dr. Kolda and the achievements recognized by this prestigious award. Tamara is an outstanding role model for other young researchers."

Ken Washington, director of Sandia California's Center for Distributed Information Systems, added: "Dr. Kolda has already demonstrated that she is a top notch scientist and innovator by developing several new computational algorithms that are in widespread use today. We have no doubt there will be many more such accomplishments in the future."

Kolda, an applied mathematician and computational scientist at Sandia-California, was cited for bringing great energy and creativity to her significant contributions in diverse areas. Her research interests include optimization, nonlinear equations, tensor decompositions, graph algorithms, parallel computing, and the design of scientific software.

"I am incredibly honored and excited to receive this award," Kolda remarked, "and I am extremely grateful to Sandia and the DOE for nominating me. I enjoy working at Sandia ... where I ... have a stimulating environment for excellence in research."

Using mathematical algorithms and software designed by Kolda and her collaborators, Sandia engineers have been able to solve complex design engineering problems on Sandia's large-scale parallel computers. Continuing to pursue her wide-ranging interests, Kolda has begun a new project to combine techniques from multilinear algebra and graph theory for data mining.

Prior to joining Sandia in 1999, Kolda held a two-year position as the Alston S. Householder Postdoctoral Fellow in Scientific Computing at Oak Ridge National Laboratory. She received her Ph.D. in applied mathematics from the University of Maryland in 1997. At Sandia, she leads projects to develop mathematical algorithms and high performance computing tools with applications ranging from engineering to biology to information science.

Outside of her research for Sandia and the Department of Energy, Kolda is active in the larger mathematics community, serving in many capacities ranging from workshop organization to editorial board duties to holding elected office. She is particularly interested in encouraging younger researchers and serving as an example to other women who are considering pursuing a career in mathematics.

Janet L. Norwood Award

The Department of Biostatistics and the Section on Statistical Genetics in the School of Public Health at the University of Alabama at Birmingham (UAB) are proud to announce the recipient of the third annual Janet L. Norwood Award for outstanding achievement by a woman in the statistical sciences, ALICE S. WHITTEMORE, Ph.D., Professor of Health Research and Policy at the Stanford University School of Medicine.

The excellence of Whittemore's work has been recognized by her election to the Institute of Medicine, by election to Fellowship in the American Statistical Association (ASA) and Fellowship in the American Association for the Advancement of Science (AAAS), by election to the Presidency of the International Biometric Society (Western North American Region), by selection to the Board of Scientific Advisors of the U.S. National Cancer Institute and to the Board of Scientific Counselors of the U.S. National Institute for Environmental Health Sciences, and by her appointment to the Prostate Health Council of the American Foundation for Urologic Diseases. Whittemore has been awarded an Outstanding Investigator Grant from the U.S. National Cancer Institute to develop improved statistical methods for the design and conduct of studies involving hereditary predisposition and modifiable lifestyle characteristics in the etiologies of site-specific cancers. This work has earned her the Eighth American Association for Cancer Research-American Cancer Society Award for Research Excellence in Cancer Epidemiology and Prevention.

At an awards ceremony in her honor, she presented a lecture to the UAB community and Birmingham community at large and received the award, including an unrestricted prize of $5,000.

AWIS appoints Executive Director

The Association for Women in Science (AWIS) announced today the appointment of SUSAN L. GANTER, Ph.D., as the Association's Executive Director.

"We are very pleased to have Susan join us," stated Elizabeth Ivey, Ph.D., AWIS President. "Her experience in academia, relationships with industry, and work with several associations, as well as her years as a board member of AWIS make a good fit for the organization. AWIS has matured as an organization and is now poised to move into its next stage, and we look to Susan to move us towards our new vision."

Ganter completed her graduate work at University of California, Santa Barbara in applied mathematics and mathematics education. She comes to AWIS from Clemson University, where she has been an Associate Professor of Mathematical Sciences since 1999. She has directed several local and national evaluation studies, including a residency at the National Science Foundation (1996–98) in which she investigated the national impact of the calculus reform initiative and helped to develop the evaluation plan for several programs in the Division of Undergraduate Education. She is one of the founding members of the National Numeracy Network, an organization developed by the National Council for Education and the Disciplines at the Woodrow Wilson National Fellowship Foundation for the purpose of promoting quantitative literacy. In addition, her work has included partnerships with industry that promote outreach to secondary mathematics students as well as professional development opportunities for secondary mathematics and science teachers. Ganter was formerly Director of the Program for the Promotion of Institutional Change at the American Association for Higher Education and a member of the Mathematical Sciences faculty at Worcester Polytechnic Institute.

AWIS, with over 3000 members, is the largest multidisciplinary scientific organization for women in the U.S. dedicated to achieving equity and full participation of women in the fields of science, technology, engineering and mathematics. Over 65% of AWIS members have doctorates in the sciences, social sciences, and engineering, and they hold positions at all levels of industry, academe, and government. By its 30th anniversary in 2001, AWIS had developed into a network, a resource, and a voice for supporters of women in science. Membership is open to any individual who supports the full participation of women in science.

SONIA KOVALEVSKY HIGH SCHOOL MATHEMATICS DAYS

Through grants from Elizabeth City State University 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 2005 for Spring 2005 using funds remaining after the August 2004 selection cycle. AWM anticipates awarding up to five 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 welcome.

Applications, not to exceed six pages, should include: a) a cover letter including the proposed date of the SK Day, expected number of attendees (with ethnic background, if known), grade level the program is aimed toward (e.g., 9th and 10th grade only), total amount requested, and organizer(s) contact information, b) plans for activities, including specific speakers to the extent known; c) qualifications of the person(s) to be in charge; d) plans for recruitment, including the securing of diversity among participants; e) 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.); f) local resources in support of the project, if any; and g) 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 2005. 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 May 27, 2005, 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, 2005**; applications via email or fax will not be accepted.

MIT names woman president

SUSAN HOCKFIELD, a distinguished neuroscientist and current provost of Yale University, has been selected as the 16th president of the Massachusetts Institute of Technology. She is expected to take office in early December.

MIT Corporation Chairman Dana G. Mead said, "As a strong advocate of the vital role that science, technology, and the research university play in the world, and with an exceptional record of achievement in serving faculty and student interests, Dr. Hockfield is clearly the best person to lead MIT in the years ahead. She brings to MIT an outstanding record as teacher, scientist and inspirational leader with a reputation for bringing out the best in all the people with whom she works."

Sloan Fellows

MEREDITH D. BETTERTON, University of Colorado, and AE JA YEE, Pennsylvania State University, received Sloan Research Fellowships in March 2004. Yee received her training in Korea; her research interests include partition theory, q-series, enumerative combinatorics, and special functions. Betterton is a mathematical biologist whose research interests include: DNA helicase motion on DNA, instabilities of melting snow surfaces, dynamics of thin wetting films with evaporation, chemotactic collapse, and electrostatic instabilities. Her web page, amath.Colorado.edu/faculty/mdb/, has some intriguing links. See also www.nature.com/nsu/010510/010510-a.html for "Grime every mountain," a science update by Philip Ball at *Nature* news services. "Dirt is a snowscape architect" is how this fascinating article begins.

U.S. team second in IMO

The U.S. team finished second of more than eighty countries at the 2004 International Mathematical Olympiad in Athens, Greece. Team members OLEG GOLDBERG, TIANKA LIU, ALISON MILLER, AARON PIXTON, and TONY ZHANG won gold medals, while MATT INCE won a silver medal. Miller was the second woman on a U.S. team, Melanie Wood having been the first in 1998 and 1999. Miller was a senior from Home Educators Enrichment Group in Niskayuna, NY.

Other honors

MARYAM MIRZAKHAM, a native of Iran, is a 2004 Clay Research Fellow. In her thesis written at Harvard under the direction of Curtis T. McMullen, she showed how to compute the Weil-Petersson volume of the moduli space of bordered Riemann surfaces. Her research interests include Teichmüller theory, hyperbolic geometry, ergodic theory, and symplectic geometry.

MAXINE L. ROCKOFF, New York Academy of Mdeicine and ANNIE SELDEN, New Mexico State University, have been elected as Fellows of the Mathematics Section of the AAAS.

JUDY KASABIAN of El Camino Community College was named State Professor of the Year for California by the Carnegie Foundation for the Advancement of Teaching; JOE GALLIAN of the University of Minnesota Duluth earned the same honor for Minnesota.

CALL FOR NOMINATIONS: 2006 LOUISE HAY AWARD

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

The nomination documents should include: a one to three page letter of nomination highlighting the exceptional contributions of the candidate to be recognized, a curriculum vitae of the candidate not to exceed three pages, and three letters supporting the nomination. It is strongly recommended that the letters represent a range of constituents affected by the nominee's work. *Five* complete copies of nomination materials for this award should be sent to: The Hay Award Selection Committee, Association for Women in Mathematics, 4114 Computer & Space Sciences Building, University of Maryland, College Park, MD 20742-2461. Nominations must be received by **April 30, 2005** and will be kept active for three years. 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.

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

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

Over the past sixteen 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 11–12, 2005 in conjunction with the Society for Industrial and Applied Mathematics (SIAM) 2005 Annual Meeting at the Hilton New Orleans Riverside Hotel, July 11–15, 2005.

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, 2005**.
Applications via email or fax will not be accepted.

OPPORTUNITIES

Call for Proposals for the 2006 Joint Summer Research Conferences

The AMS, the Institute of Mathematical Statistics, and SIAM welcome proposals from mathematicians, either singly or in groups, for conferences to take place in the summer of 2006 as part of the Joint Summer Research Conferences, contingent upon a grant from the NSF. The conferences will take place at Snowbird Resort located in the beautiful Wasatch Mountains just outside Salt Lake City, Utah. For over twenty years these conferences have played a vital role in disseminating the latest research to more than 9,000 mathematicians whose research interests span the breadth of the mathematical sciences.

Individuals willing to serve as organizers should be aware that staff of the sponsoring societies handle the logistical details of the conferences, thus making it possible for the organizers to focus almost exclusively on the scientific aspects of their conference. Organizers are strongly encouraged to publish conference proceedings with one of the sponsoring societies. The sponsoring societies are committed to the rapid and widest possible dissemination of these proceedings as a means of sharing the conference research with those unable to attend. The selected proposals will represent diverse areas of mathematical activity, with emphasis on areas currently especially active. Conferences typically run for one week with forty-five to sixty-five participants. However, there is some flexibility in structure; for example, conferences of longer duration may be permitted. Proposals for conferences designed specifically for very recent Ph.D.'s in a focused area are especially welcome.

Organizers are expected to make a vigorous attempt to include qualified women, underrepresented minorities, and junior scientists (advanced graduate students and recent Ph.D.'s) as participants in their conference, and as part of the Organizing Committee where possible and appropriate.

Proposals will be evaluated by the AMS-IMS-SIAM Committee on Joint Summer Research Conferences in the Mathematical Sciences. Members of this committee (see http://www.ams.org/meetings/srcscomm.html for the member list and contact information) are willing to provide guidance on the preparation of proposals. Complete information on submitting proposals, including examples of recent successful proposals for reference, is available at www.ams.org/meetings/topics.html. Samples may also be requested by contacting the Meetings and Conferences Department as indicated below.

A statement of intent to submit a proposal should be received by **December 17, 2004**. Submission of intent to submit a proposal is optional. For conferences to be held in the summer of 2006, the deadline for the complete formal proposal submission deadline is **January 14, 2005**. Conference proposers will be notified of the committee's decisions in late February.

Submit statements of intent and proposals to: Joint Summer Research Conferences, AMS Meetings and Conferences Department, P.O. Box 6887, Providence, RI 02940; fax: 401-455-4004; e-mail: meet@ams.org. Electronic submissions are preferred. For questions concerning the proposal evaluation process, contact Dr. Jim Maxwell, AMS Associate Executive Director, via email (jwm@ams.org) or phone (401-455-4101).

AAAS Meeting to Offer Strong Mathematics Program

Warren Page, Secretary of Section A of the AAAS, wxpny@aol.com

The 2005 Annual Meeting of the American Association for the Advancement of Science, February 17–21, in Washington, DC will feature many outstanding expository talks by prominent mathematicians. These include the following three-hour symposia (and organizers) sponsored by Section A (Mathematics) of the AAAS:

- Mathematical Oncology: Bridging the Scientific Divide (Kristin Swanson, University of Washington)
- Understanding the Interaction of Noise in Complex Systems (Rachel Kuske, University of British Columbia)
- Mapping the Human Brain from Infancy to Old Age (Paul Thompson, UCLA School of Medicine)
- Finding and Keeping Graduate Students in the Mathematical Sciences (Amy Cohen, Rutgers University)

Other symposia that will be of interest to the mathematical community include: Mathematics and Human Infectious Disease; Astrotomography; Einstein in Historical and Philosophical Perspective; Something from

Nothing? Scientific Inference and Missing Data; Mathematics and Biology 2010: Linking Undergraduate Disciplines; Complex Adaptive Systems: Advances in Theory and Practice; Continuing to Learn from TIMSS; and Now Also from PISA.

The above symposia are only a few of the 150 or so AAAS program offerings in the physical, life, social, and biological sciences. For further details about the 2005 AAAS program, see the October 8, 2004 issue of *Science*.

AAAS annual meetings are the showcases of American science, and they encourage participation by mathematicians and mathematics educators. (AAAS acknowledges the generous contributions of AMS for travel support and SIAM for support of media awareness.) In presenting mathematics-related themes to the AAAS Program Committee, I have found the committee to be genuinely interested in offering symposia on mathematical topics of current interest. Thus, Section A's Committee seeks organizers and speakers who can present substantial new material in an accessible manner to a large scientific audience. Toward this end, I invite you to attend our Section A Committee business meeting 7:45–10:00 P.M. Friday, February 18, 2004 at the Wardman Park Marriott Hotel (room to be determined). I invite you also to send me, and encourage your colleagues to send me, symposia proposals for future AAAS annual meetings.

MentorNet, an E-Mentoring Network for Women in Science, Engineering, and Mathematics

The MentorNet One-on-One Mentoring Programs are a chance to make a big difference in the life of someone else, while spending as little as 20 minutes a week using email. MentorNet's One-on-One Mentoring Programs pair women engineering and science community college, undergraduate, and graduate students, postdocs and untenured faculty as protégés with female or male professionals from all sectors as mentors for one-on-one, email-based mentoring (e-mentoring) relationships.

Our flagship Industry E-Mentoring Program is for protégés interested in working in industry or at a government laboratory or agency, while our Academic Career E-Mentoring Program is for graduate students, postdocs and untenured faculty pursuing faculty careers.

The program has proven effective by providing "real world" information, encouragement, advice, and access to networks that are otherwise often unavailable to women students in the male dominated fields of engineering and science. This why over 90% of participants would recommend MentorNet's e-mentoring programs to a friend or colleague.

Since 1998, MentorNet has matched nearly 20,000 proteges and mentors with strong results. We hope you will join them! For more information, see www.MentorNet.net.

PUBLICATIONS OF INTEREST

Thanks to Ron Rosier (CBMS) for bringing this interesting article to our attention: "Keep Gender on the Agenda," the president's column of Terry Speed (UC Berkeley) in the May–June 2004 *IMS Bulletin*, newsletter of the Institute for Mathematical Statistics. Referring to gender discrimination issues, Speed says: "So is it all over? Has gender ceased to be an issue, at least in academia, in this new millennium? Well, not quite. Let me explain and discuss a little, and let me tell you what I think this has to do with the IMS." He estimates that at most 15 percent of IMS members are women, and wonders about what might be done to change this situation. He reaches the conclusion to the only way to change this percentage is: "get the fifteen percent looking like fifty." He asks women "to keep on doing what you are doing: standing up and being counted, mentoring other women, and all the things men do."

Then he explains what he is asking men to do, to improve the situation. "Wherever you are and whatever you do … work hard to ensure that women are involved to the greatest extent possible. (The risk of overdoing it is so slight in our field, I ignore it.) … Keep gender on the agenda."

For the full text of the article, which has also been reprinted in the June issue of *Amstat News*, the newsmagazine of the American Statistical Society (ASA), see page 4 of www.imstat.org/bulletin/Bulletin 33_2.pdf. As Ron says, "The article is clearly written for a male audience and it does, I think, make the point well that we do need to follow the imperative in the title." Perhaps you know someone who might benefit from reading this article….

FYI: The AIP Bulletin of Science Policy News (an online newsletter of the American Institute of Physics) for July 28, 2004, included the report "Point-Counterpoint: Status of U.S. Science and Engineering Workforce" by Richard M. Jones, Media and Government Relations Division, AIP. (See www.aip.org/fyi/2004/103.html for the full report.) On July 15, the Congressional Research and Development Caucus, in conjunction with several engineering societies, sponsored a briefing "featuring three speakers with a range of views on whether the U.S. is training a large enough S&T workforce for the future."

Michael P. Crosby, Executive Officer for the National Science Board, believes that the declining numbers of US citizens who are training to become scientists and engineers have not yet created a crisis, but might well do so in the long run. "Presenting a different view was Michael S. Teitelbaum, a demographer at the Alfred P. Sloan Foundation. Teitelbaum began by saying that the claim about an impending S&T workforce shortage has been made for almost two decades.... Asking if the current pronouncement is 'deja vu, all over again,' he characterized the shortfall claims as lacking analytical rigor." John A. Brighton, Assistant Director for Engineering at the NSF, "urged that science and engineering be viewed as distinct disciplines (rather than lumping them together as is customary), saying that they are as distinct as railroads and highways are as forms of transportation."

Slides from the presentations are available at www.researchcaucus.org/schedule/04July15/default.asp.

"Panel Debates Politics' Role in Scientists' Appointment," by David Brown, appeared in the *Washington Post*, July 22, 2004. From that article:

> The National Academy of Sciences yesterday waded into the murky world of whether—or how much—politics and point of view should be considered in the appointment of scientists to federal advisory committees....
>
> About 200 of the advisory committees are devoted to considering scientific and technical issues. In recent years, the Bush administration has been accused of considering moral and political views, and not just scientific expertise, in making appointments to some of those panels. Some groups have also claimed that many more appointees have potential conflicts of interest than in the past.
>
> The NAS panel ... will consider whether there are barriers to getting good scientists to serve on committees or take full-time government jobs, and what principles should be observed in selecting researchers, engineers and medical clinicians for committees....

Report of the Advisory Committee for GPRA Performance Assessment appears online at www.nsf.gov/pubsys/ods/getpub.cfm?nsf04216. It links funded NSF projects and NSF activities to performance indicators/goals. From the summary:

> The group conducted extensive discussions on the indicators for NSF's four strategic outcome goals.... The Committee ... concluded that the ... goals are mutually reinforcing and synergistic. They represent an integrated framework that combines research and education in a positive way and also provides the organizational infrastructure to advance the national scientific, technological, engineering, and mathematics enterprise....
>
> NSF's portfolio of accomplishments for the *people* outcome goal continues to be impressive in its strength, breadth, and diversity. The portfolio contains important examples of education and research programs as well as programs that integrate research and education. All are designed to enable students, educators and researchers to explore the challenges of science, technology, engineering, and mathematics (STEM) related fields. NSF accomplishments in the *ideas* outcome goal have advanced the frontiers of discovery and hold considerable promise for expanding fundamental understanding in many areas of science and engineering and for addressing important societal concerns. NSF accomplishments in the *tools* outcome goal have expanded access to and availability of data and materials, and have enabled the capacity for discovery by scientists, engineers and educators. NSF's accomplishments in the *organizational excellence* goal demonstrate innovation in business processes; in methods of recruitment, development, retention, and recognition of its staff; attention to continuous improvement in management effectiveness; and a strong commitment to continued improvements in its merit review process. Taken together, the strategic outcome goals demonstrate excellence, relevance and leadership. The nation's investment in these activities is well made.

AWM AT SIAM

Sonia Kovalevsky Lecture: *(L to R):* Barbara Keyfitz, The Fields Institute (AWM President-Elect) and Joyce McLaughlin, Rensselaer Polytechnic Institute. Professor McLaughlin presented the Second Annual AWM- SIAM Sonia Kovalevksy Lecture entitled *"Creating shear wave speed images of tissue"* on July 13, 2004

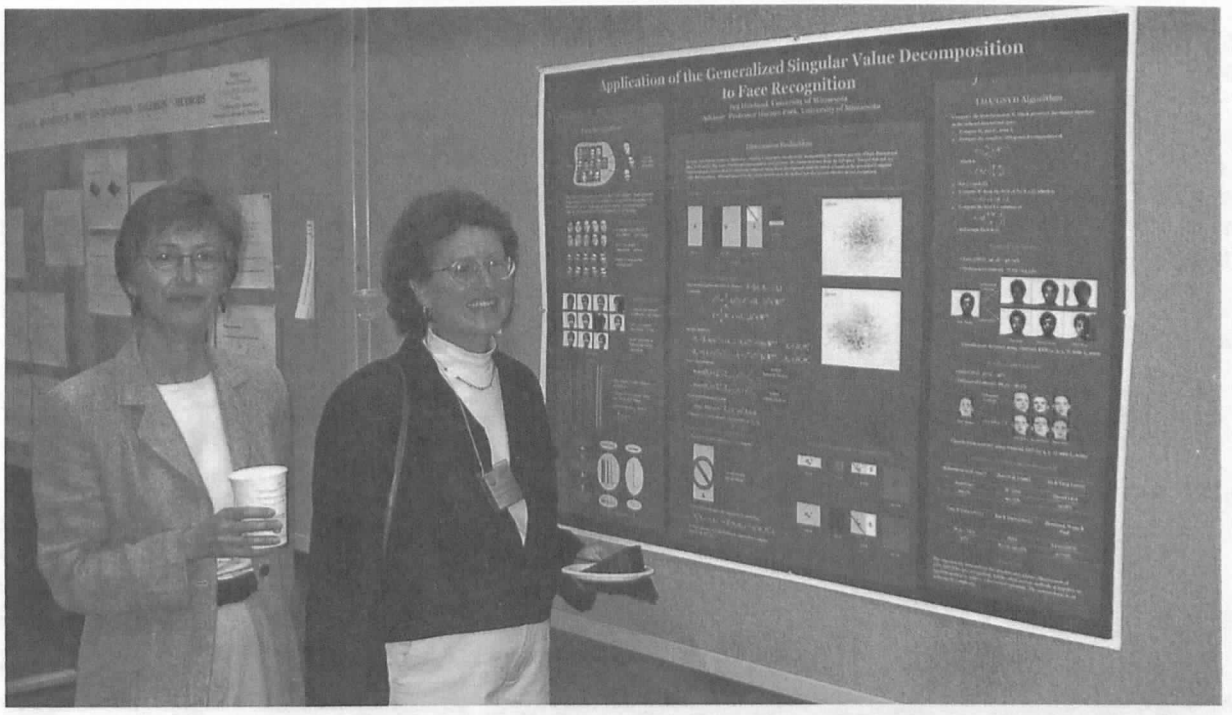
AWM Minisymposium on Career Questions and Potential Options (L to R): Suzanne Lenhart, University of Tennessee & Oak Ridge National Lab (Workshop Organizer); Carol S. Woodward, Lawrence Livermore National Laboratory; Maeve L. McCarthy, Murrary State University;(Minisymposium co-organizer); Barbara Lee Keyfitz, The Fields Institute; Martha L. Abell, Georgia Southern University; Lisette de Pillis, Harvey Mudd College; Renee Fister, Murrary State University (Minisymposium co-organizer)

MINISYMPOSIA

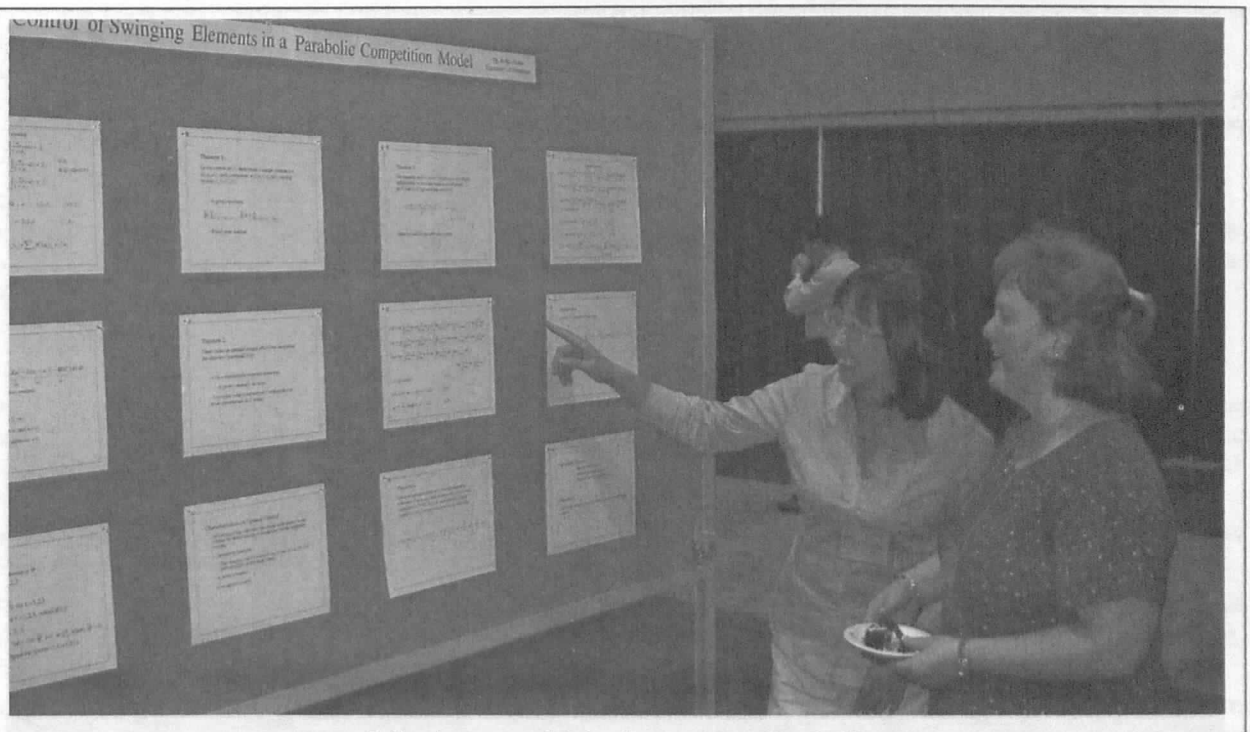
AWM Minisymposium on Modeling and Numerical Methods (L to R):
Filiz Dogru, Grand Valley State University; Jennifer K. Ryan, Oak Ridge National Laboratory;
Julie K. Raye, Virginia Commonwealth University; Genetha Anne Gray, Sandia National Labs.

AWM Minisymposium on Mathematical Biology (L to R):
Mariel Vazquez, University of California, Berkeley; Meredith L. Greer, Bates College;
Vera Cherepinsky, Courant Institute and Yale University; Seema Nanda, University of Tennessee

POSTER SESSION



Peg Howland and Suzanne Lenhart at Howland's poster



Erika Asano explaining her poster to Renée Fister

JULY 2005, PORTLAND, OR

Donna M. G. Comissiong explaining her poster

Jennifer K. Ryan, Fengyan Li, Suzanne Lenhart, and Mariel Vazquez

Call for Proposals for the 2006 Joint Summer Research Conferences

The American Mathematical Society, the Institute of Mathematical Statistics, and the Society for Industrial and Applied Mathematics welcome proposals from mathematicians, either singly or in groups, for conferences to take place in the summer of 2006 as part of the Joint Summer Research Conferences, contingent upon a grant from the National Science Foundation. The conferences will take place at Snowbird Resort located in the beautiful Wasatch Mountains just outside Salt Lake City, Utah. For over twenty years these conferences have played a vital role in disseminating the latest research to more than 9,000 mathematicians whose research interests span the breadth of the mathematical sciences.

Individuals willing to serve as organizers should be aware that staff of the sponsoring societies handle the logistical details of the conferences, thus making it possible for the organizers to focus almost exclusively on the scientific aspects of their conference. In particular:

- Core funding for the conferences is provided by a grant from the National Science Foundation (pending for the 2006 series).
- The professional conference coordinators in the AMS office will provide full logistical support and assistance before, during, and after the conference, thereby freeing the organizers to concentrate on providing a high-quality scientific program.
- Organizers are strongly encouraged to publish conference proceedings with one of the sponsoring societies. The sponsoring societies are committed to the rapid and widest possible dissemination of these proceedings as a means of sharing the conference research with those unable to attend.
- The selected proposals will represent diverse areas of mathematical activity, with emphasis on areas currently especially active. Conferences typically run for one week with forty-five to sixty-five participants. However, there is some flexibility in structure; for example, conferences of longer duration may be permitted.
- Proposals for conferences designed specifically for very recent Ph.D.s in a focused area are especially welcome.

Proposal Preparation

Proposals will be evaluated by the AMS-IMS-SIAM Committee on Joint Summer Research Conferences in the Mathematical Sciences. Members of this committee (see www.ams.org/meetings/srcscomm.html for the member list and contact information) are willing to provide guidance on the preparation of proposals.

Proposal preparation is straightforward. All proposals must include:

(1) title of the proposed conference;

(2) the names and affiliations of proposed members and the chair(s) of the Organizing Committee. Please include the curriculum vitae of the chair(s); (compact version, no more than five pages);

(3) a three- to four-page narrative written for the nonspecialist, describing the focus of the topic, including the importance and timeliness of the topic. Keep in mind that the members of the Selection Committee are active research mathematicians from a variety of fields.

(4) a list of the recent conferences in the same or closely related areas;

(5) a list of the proposed principal speakers, the majority of whom have agreed to participate (denote with an asterisk those that have been contacted and have agreed to participate) and a description of how you plan to schedule the speakers (i.e., number and length of talks per day); and

(6) estimated total attendance and a tentative list of individuals to be invited to participate.

Organizers are expected to make a vigorous attempt to include qualified women, underrepresented minorities, and junior scientists (advanced graduate students and recent Ph.D.'s) as participants in their conference, and as part of the Organizing Committee where possible and appropriate.

Sample Proposals

Complete information on submitting a proposal, including examples of recent successful proposals for reference, is available at www.ams.org/meetings/topics.html. Samples may also be requested by contacting the Meetings and Conferences Department as indicated below.

Deadlines

There are three deadlines of which potential organizers should be aware.

Preproposal Submission: Members of the Selection Committee are willing to provide feedback on preproposals which address items (2) and (3) above and which include a tentative list of principal speakers who will be contacted IF a complete proposal is submitted. Preproposals should be submitted by **October 15, 2004**, to insure sufficient time for feedback from a member of the Selection Committee. Submission of preproposals is optional.

Intent to Submit a Proposal: A statement of intent to submit a proposal should be received by **December 17, 2004**. Submission of intent to submit a proposal is optional.

Formal Proposal: For conferences to be held in the summer of 2006, the deadline for the complete formal proposal submission deadline is **January 14, 2005.** Conference proposers will be notified of the committee's decisions in late February.

Submit preproposals and proposals to: **Joint Summer Research Conferences, AMS Meetings and Conferences Department, P.O. Box 6887, Providence, RI 02940; fax: 401-455-4004; e-mail: meet@ams.org.** Electronic submissions are preferred. For questions concerning the proposal evaluation process, contact Dr. Jim Maxwell, AMS Associate Executive Director, via email (jwm@ams.org) or phone (401-455-4101).

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THE UNIVERSITY of WISCONSIN MADISON

Graduate Fellowships for Women

The University of Wisconsin-Madison has a long tradition of excellence in graduate education in Mathematics (1000 PhDs since 1897). The Department has strong research groups in Algebra, Analysis, Applied Mathematics, Combinatorics, Differential Equations, Geometry, Logic, Number Theory, Probability and Topology.

Thanks to a variety of sources which provide opportunities for women in science, the Department will award a number of fellowships to talented women who apply to the PhD program. We have three categories of Fellowships:

Hirschfelder Fellowship,
Wisconsin Fellowships for Women in Mathematics,
VIGRE Fellowships (for U.S. citizens and residents)

The Admissions Committee will automatically consider every female applicant for these awards. Application deadline for the PhD program: December 31, 2004.

For more information on the graduate program and application materials, see:

http://www.math.wisc.edu

Questions can be directed to the Graduate Program secretary by email to

grad_program@math.wisc.edu

and by regular mail to

Graduate Program Secretary
Department of Mathematics
University of Wisconsin - Madison
480 Lincoln Drive
Madison, WI 53706

The University of Wisconsin is an Affirmative Action, Equal Opportunity Employer and encourages applications from women and minorities.

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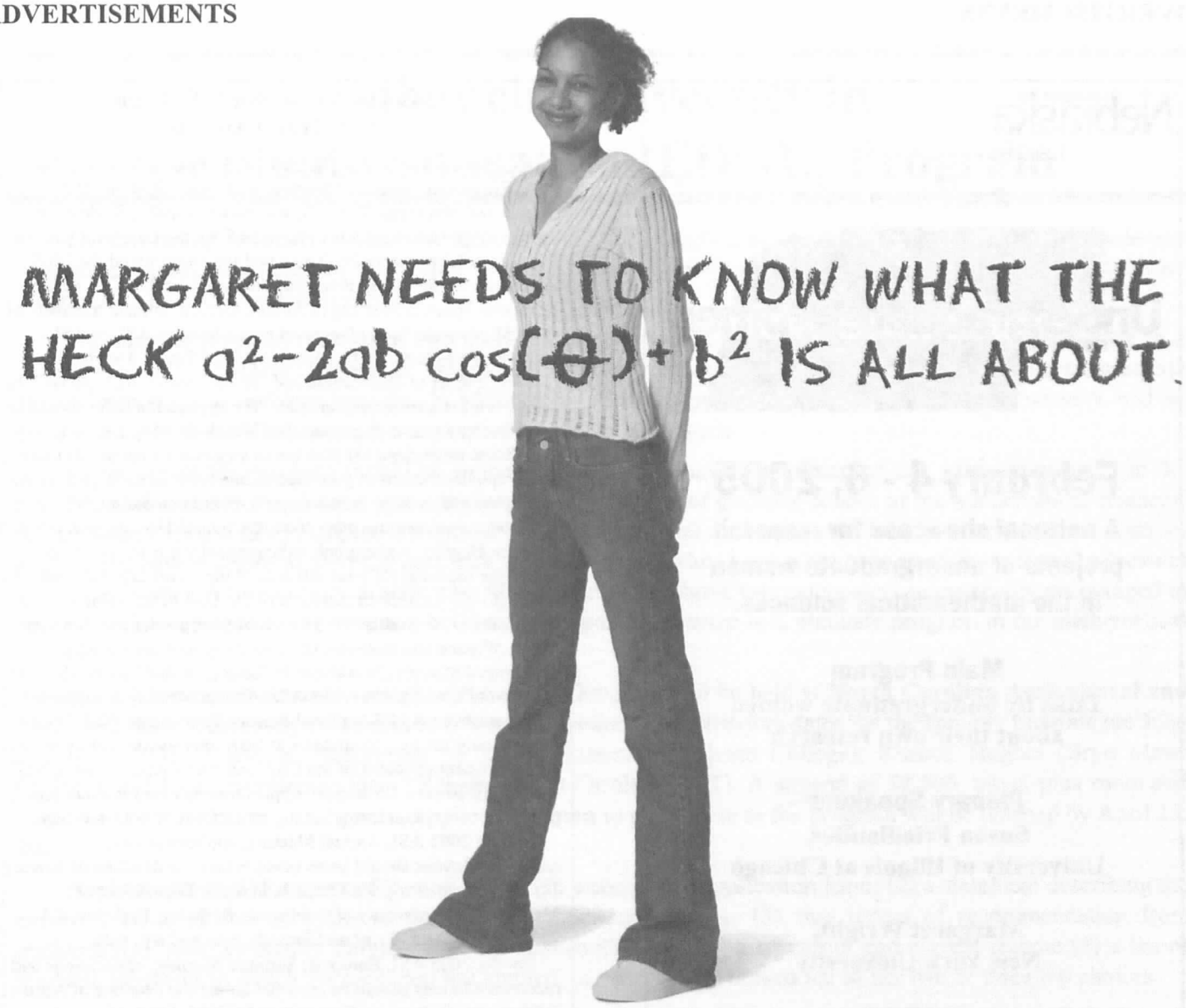

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University of Nebraska Lincoln

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Nebraska Conference for
Undergraduate Women
in Mathematics

February 4 - 6, 2005

A national showcase for research projects of undergraduate women in the mathematical sciences.

Main Program
Talks by undergraduate women about their own research

Plenary Speakers
Susan Friedlander,
University of Illinois at Chicago

Margaret Wright,
New York University

For more information
or to register, request funding
or sign up to give a talk,
visit us on the web at

www.math.unl.edu/~ncuwm

or write to us at

ncuwm@math.unl.edu

Department of Mathematics
University of Nebraska-Lincoln
203 Avery Hall
Lincoln, NE 68588-0130

Deadline for registration
January 21, 2005

University of Nebraska-Lincoln
An equal opportunity educator and employer with a comprehensive plan for diversity

Association for Symbolic Logic ASL Travel Awards

Student Travel Awards: The 2005 ASL Annual Meeting, 2005 ASL European Summer Meeting, and Other ASL or ASL-Sponsored Meetings. The ASL will make available modest travel awards to graduate students in logic and (for the European Summer Meeting only) to recent Ph.D.'s so that they may attend the 2005 ASL Annual Meeting in Stanford, California, or the 2005 ASL European Summer Meeting in Athens, Greece. Student members of the ASL also may apply for travel grants to other ASL or ASL-sponsored meetings. To be considered for a Travel Award, please (1) send a letter of application, and (2) ask your thesis supervisor to send a brief recommendation letter. The application letter should be brief (preferably one page) and should include: (1) your name; (2) your home institution; (3) your thesis supervisor's name; (4) a one-paragraph description of your studies and work in logic, *and, in the case of an ASL student member application to attend an ASL or ASL-sponsored meeting other than the Annual Meeting or European Summer Meeting*, a paragraph indicating why it is important to attend the meeting; (5) your estimate of the travel expenses you will incur; (6) (for citizens or residents of the USA) citizenship or visa status; and (7) (voluntary) indication of your gender and minority status. Women and members of minority groups are strongly encouraged to apply. In addition to funds provided by the ASL, the program of travel grants to the ASL Annual Meeting is supported by a grant from the US National Science Foundation; NSF funds may be awarded only to students at USA universities and to citizens and permanent residents of the USA. Air travel paid for using NSF funds must be on a US airline. Application by email is encouraged; put "ASL travel application" in the subject line of your message.

For the 2005 ASL Annual Meeting, applications and recommendations should be received before the deadline of January 14, 2005, by the Program Chair: John Steel, Department of Mathematics, University of California Berkeley, Berkeley, CA 94720, USA; email: steel@math.berkeley.edu.

For the 2005 ASL European Summer Meeting, applications and recommendations should be received before the deadline of April 1, 2005, by the Organizing Committee: LC2005, Dept. of Mathematics, Univ. of Athens, GR-157 84 Zografou, Greece; email: lc2005@math.uoa.gr

For ASL student member travel grants to other ASL or ASL-sponsored meetings, applications and recommendations should be received at least three months prior to the meeting at the ASL Business Office: ASL, Box 742, Vassar College, 124 Raymond Avenue, Poughkeepsie, New York 12604, USA; Fax: 1-845-437-7830; email: asl@vassar.edu. Decisions will be communicated at least two months prior to the meeting.

2005 ASL Annual Meeting. *March 19 –22, 2005, Stanford, CA*
2005 ASL European Summer Meeting. *July 28 – August 3, 2005, Athens, Greece*

For further information about these meetings, and other ASL and ASL-sponsored meetings, visit the ASL website at
https://aslonline.org/Meetings.htm

ASL, Box 742, Vassar College
124 Raymond Ave., Poughkeepsie, NY 12604
email: asl@vassar.edu; Fax: 845-437-7830
Also visit the ASL website: http://www.aslonline.org.

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Enhancing Diversity in Graduate Education (EDGE) Program

The Enhancing Diversity in Graduate Education (EDGE) Program is a post baccalaureate summer enrichment program designed to strengthen the ability of women and minority students to successfully complete graduate programs in the mathematical sciences.

The summer program consists of two core courses in analysis and algebra/linear algebra, a minicourse in a current area of mathematical research, short-term visitors from academia and industry, guest lectures, graduate student mentors, and problem sessions. In addition, a follow-up mentoring program and support network will be established with the participantsand their respective graduate programs.

Applicants to the program should be women who either (i) have been accepted to a graduate program in the mathematical sciences or (ii) have just completed their first year of graduate school in the mathematical sciences. All applicants should have completed standard junior--senior-level undergraduate courses in analysis and abstract algebra and have a desire to earn the doctorate degree. Women who have taken time away from formal education as well as women from minority groups who fit into one of the above two categories are especially encouraged to apply. Final acceptance to the program is contingent upon acceptance to a graduate program in the mathematical sciences.

In 2005 the eighth summer session of the EDGE Program will be held at **North Carolina Agricultural and Technical State University , Greensboro, North Carolina.** The tentative dates for the summer program are June 6--July 1, 2005. It will be co-directed by Sylvia Bozeman (Spelman College), Rhonda Hughes (Bryn Mawr College), and local coordinator Janis Oldham (North Carolina A&T). A stipend of $2,000, travel plus room and board will be awarded to participants. Applicants chosen to participate in the program will be notified by April 15, 2005.

Applications should consist of the following: (1) a completed application form; (2) a statement describing the expected value of this program to the applicant's academic goals; (3) two letters of recommendation from mathematical sciences faculty familiar with the applicant's work; (4) a transcript and current resume (5) a list of graduate programs to which the applicant has applied, together with a ranked list of her two or three top choices.

The application deadline is **March 1, 2005.** Applications should be sent to: **EDGE Program, P.O. Box 63 Swarthmore, PA 19081.** Actual conduct of the EDGE Program in 2005 is contingent upon continued funding. For more information visit the program's website at **http://www.edgeforwomen.org/**

OCCIDENTAL COLLEGE, LOS ANGELES, CA - ASSISTANT PROFESSORSHIP Occidental College invites candidates for a tenure-track assistant professorship in the Department of Mathematics. A Ph.D. in mathematics is required. In addition, a strong commitment to teaching and research at a liberal arts institution is required. All areas of mathematics considered, preference given to candidates who do not overlap with expertise already found in the department. The program supports students pursuing a range of professional and intellectual goals. Faculty members required to assist majors in their culminating senior projects, teach in mathematics and the general college curriculum, and encouraged to work with students in summer undergraduate research. Teaching schedule is the equivalent of 5 semester courses per year. A paid semester leave is usually granted every four years. For more information, visit **http://departments.oxy.edu/math**. Applicants should submit a letter of interest demonstrating a commitment to academic excellence in a diverse liberal arts environment. The application must include a statement of teaching philosophy, with areas of teaching interest; plans for professional achievement, especially research; a curriculum vitae; samples of scholarly work; and 3 letters of recommendation to: **Faculty Search Office M8888, Attention: Dr. Ron Buckmire, Math Search Chair, Occidental College, 1600 Campus Road, Los Angeles, CA 90041**. Review of applications will begin December 1, 2004. Department representatives will attend the Joint Math Meetings in Atlanta.

Occidental College is an equal opportunity employer committed to academic excellence in a diverse community and supporting interdisciplinary and multicultural academic programs that provide a gifted and diverse group of students with an educational experience that prepares them for leadership in a pluralistic world. Women and minorities are strongly encouraged to apply.

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BALL STATE UNIVERSITY - DEPARTMENT OF MATHEMATICAL SCIENCE - Assistant Professor/Statistics - Tenure - track position in statistics available August 19, 2005. The Department seeks to attract an active, culturally and academically diverse faculty of the highest caliber to further the mission of the department and the university. Responsibilities: teaching approximately 8 to 9 hours per semester; research in statistics, and professional service. Salary and benefits are competitive and commensurate with qualifications. Additional benefits for first-year faculty are negotiable. Minimum qualification: all requirements for a doctorate in statistics or related area completed by August 1, 2005. Preferred qualifications: capability of teaching a variety of advanced courses in statistics, including biostatistics, linear models, design of experiments, and statistical computing; expertise in the use of statistical software, including SAS. The Department of Mathematical Sciences includes faculty in pure and applied mathematics, statistics, actuarial science, and mathematics education. The Department offers a range of academic programs leading to B.A., B.S., M.A., M.S., and M.A.E. degrees in these areas. The Department has three faculty with doctoral degrees in statistics and three others with master's degrees in statistics as well as fourteen students pursuing master's degrees in statistics. The master's program is complemented by a statistics option at the undergraduate level that currently enrolls nine students. Visit www.bsu.edu/web/math/ for more information. An applicant's file is complete when all of the following have been received: letter of application, curriculum vitae, research summary, three letters of reference at least one of which substantially addresses the candidate's teaching ability and performance, and copy of graduate transcripts showing highest degree earned. Send to: **Dale Umbach, Chair, Statistics Search Committee, Department of Mathematical Sciences, Ball State University, Muncie, IN 47306.** (Tel: 765.285.8640; Fax: 765.285.1721; E-mail: dumbach@bsu.edu). Review of applications will begin January 3, 2005, and will continue until the position is filled.

BOISE STATE UNIVERSITY - DEPARTMENT OF MATHEMATICS - The Department of Mathematics at Boise State University in Boise, Idaho invites applications for two tenure-track positions at the Assistant Professor level, one in mathematics education and one in set theory, to begin August, 2005. Doctorate must be conferred by the starting date. Applicants must demonstrate the potential to develop a strong research program as well as a strong commitment to teaching. For further information, please consult our website http://math.boisestate.edu/. To apply, send a letter of application containing a summary of research and teaching interests, vita, and transcripts to: **Search Committee (specify Math Ed or Set Theory), Department of Mathematics, Boise State University, Boise, ID 83725-1555** and arrange for 3 letters of reference, at least one of which addresses teaching ability/experience, to be sent to the same address. Applications for the mathematics education position will be screened as received and screening will continue until the position is filled. Screening for the set theory position will begin January 15, 2005. Boise State University is strongly committed to achieving excellence through cultural diversity. The University actively encourages applications and nominations of women, persons of color, and members of other underrepresented groups. EOE/AA Institution. Veteran's preference may be applicable.

BOWLING GREEN UNIVERSITY - DEPARTMENT OF MATHEMATICS AND STATISTICS - Applications are invited for three tenure track positions beginning in Fall 2005. Please see **www.bgsu.edu/dept/math** for full details. 1. Director of Service Mathematics. Open rank. PhD or EdD required; experience coordinating multi-section service courses and a willingness to experiment with innovative approaches to entry level courses. Starting date July 1, 2005. Eleven month contract. 2-3. Assistant Professor in statistics, algebra. PhD required and ability to broaden or complement current research strengths in the department. Applications must be postmarked by January 14, 2005. BGSU is an AA/EO employer.

BROWN UNIVERSITY - DEPARTMENT OF MATHEMATICS - J. D. Tamarkin Assistant Professorship - One three-year non-tenured non-renewable appointment, beginning July 1, 2005. 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 vitæ, an AMS Standard Cover Sheet, and three letters of recommendation must be received by December 1, 2004. 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/juniorsearch.shtml. Email inquiries should be addressed to juniorsearch@math.brown.edu. Brown University is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minorities.

BROWN UNIVERSITY - DEPARTMENT OF MATHEMATICS – One professorship at the Associate Professor level with tenure, the appointment to begin July 1, 2005. [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 this position should send a letter of application along with a curriculum vitae and arrange to have at least five letters of recommendation sent to: **Senior Search Committee, Department of Mathematics, Box 1917, Brown University, Providence, Rhode Island 02912.** Applications must be postmarked by **December 13, 2004**, 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. This position is Pending Approval. Brown University is an Equal Opportunity/Affirmative Action employer and encourages applications from women and minorities.

CALIFORNIA STATE UNIVERSITY, NORTHRIDGE – DEPARTMENT OF MATHEMATICS - The Department of Mathematics invites applications for a tenure-track appointment at the assistant or associate professor level effective Fall 2005. This position is affiliated with Teachers for a New Era (TNE), an initiative funded in part by the Carnegie Corporation of New York. For more information, please visit http://tne.csun.edu. Qualifications: A doctorate in the mathematical sciences or in education with significant experience in mathematics. We also value experience teaching K-12 mathematics, managing and developing teacher preparation programs, familiarity with issues in mathematical education, including standards and classroom practices, and any other expertise in preparing students to be successful classroom teachers. Potential for publication in mathematical education is expected. At the time of the appointment, the successful applicant, if not a U.S. citizen, must have authorization from the Bureau of Citizenship and Immigration Services to work in the United States. Responsibilities: the successful candidate will assume an active role in: (1) Student advisement for prospective teachers; (2) Teaching, designing and collaborating on courses for pre-service teachers; (3) Creating and maintaining partnerships with colleagues in the College of Education and mathematics teachers at local schools, including the new Los Angeles Unified School District high school just opened on the CSUN campus; (4) Grant activities to support K-12 projects in the department; (5) Participating in the Carnegie initiative; (6) Continuing scholarly activities in research and publication in mathematics education; (7) A long-term commitment to K-12 mathematics education. Applicants should send a vita, the AMS standard cover sheet, and three letters of recommendation, one of them addressing the candidate's teaching abilities, to the **Hiring Committee, Department of Mathematics, CSUN, Northridge, CA 91330-8313**. Review of applications will begin on January 15, 2005 and continue until a candidate is appointed or the search is terminated. Email (inquiries only) math.hiring1@csun.edu. California State University is an Equal Opportunity, Affirmative Action employer.

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CARLETON COLLEGE - DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE – Department of Mathematics and Computer Science has a tenure-track position in Mathematics at the Assistant Professor level to begin September, 2005. Ph.D. must be completed or substantially completed, and evidence of teaching excellence is essential. Carleton faculty ordinarily teach two courses per term, three terms per nine-month year. Carleton is a highly selective liberal arts college 45 miles south of Minneapolis/St. Paul. The department has 12 full-time members committed to teaching mathematics, statistics and computer science in a liberal arts setting. Faculty also are expected to maintain an active scholarly agenda and the college provides generous support for research and other professional activities. The department recently moved into a new building with excellent facilities for learning and teaching. Computing resources available to the department include four teaching laboratories equipped with Pentium IV PCs running Windows XP and Linux, a four-processor student server, a four-processor data mining server, web, email, and file servers. The department employs a full-time computer technician/system administrator. Send letter of application, graduate transcript, résumé, a concise statement about working in an undergraduate liberal arts environment, and three letters of recommendation to **Math Search, Department of Mathematics and Computer Science, One North College Street, Northfield, MN 55057-4025**. (Send questions to:mathsearch@mathcs.carleton.edu.) At least one letter should specifically address teaching experience. Carleton is an affirmative action/equal employment employer. We are committed to developing our faculty to better reflect the diversity of our student body and American society. Women and members of minority groups are strongly encouraged to apply. Review of applications will begin December 1 and continue until the position is filled.

CARNEGIE MELLON UNIVERSITY - DEPARTMENT OF MATHEMATICAL SCIENCES - CENTER FOR NONLINEAR ANALYSIS - The Center for Nonlinear Analysis expects to make several Post-Doctoral appointments for 2005-06 in applied analysis, and potential focus areas include materials science, systems biology, and fluid flow. These will be one- or two-year joint appointments by the Center and the Department of Mathematical Sciences. Recipients will teach at most two courses per year. Applicants should send a vita, list of publications, a statement describing current and planned research, and arrange to have at least three letters of recommendation sent to **Post-Doctoral Appointments Committee, Center for Nonlinear Analysis, Department of Mathematical Sciences, Carnegie Mellon University, Pittsburgh, PA 15213-3890**. The deadline for applications is December 15, 2004.

CARNEGIE MELLON UNIVERSITY - DEPARTMENT OF MATHEMATICAL SCIENCES - Zeev Nehari Visiting Assistant Professorship - This appointment is for a period of three years, beginning in September 2005, and carries a teaching load of three courses during the academic year. Applicants are expected to show exceptional research promise, as well as clear evidence of achievement and should have research interests which intersect those of current faculty of the Department. Applicants should send curriculum vitae, list of publications, a statement describing current and planned research, and arrange to have at least three letters of recommendation sent to: **Appointments Committee, Department of Mathematical Sciences, Carnegie Mellon University, Pittsburgh, PA 15213**. The deadline for applications is January 17, 2005. The Department of Mathematical Sciences is committed to increasing the number of women and minority faculty. Carnegie Mellon University is an Affirmative Action /Equal Opportunity Employer and encourages applications from women and minorities.

CASE WESTERN RESERVE UNIVERSITY - DEPARTMENT OF MATHEMATICS - One or more tenure-track appointments. Open rank; however, appointment at the rank of assistant professor is strongly preferred. We especially emphasize coordination with Department, College and University goals, including undergraduate teaching in the University's SAGES Program. Areas of preference have been identified to meet Department priorities. For more information and instructions, see http://www.case.edu/artsci/dean/searches/mathematics05.html. Indicate in which area you wish to be considered. The successful candidate will hold the Ph.D. or equivalent and have, relative to career stage, a distinguished record of publication, research, service, and teaching. Compensation commensurate with qualifications. Electronic applications only, to: **James Alexander, math-faculty-position@cwru.edu**, consisting of a letter of application, which indicates in which area of preference you wish to be considered, AMS cover sheet, a c.v., and the names and contact information for four referees to whom we may write. Visiting positions/instructorships/lectureships may also be open. Evaluation of applications will begin December 15, 2004. Case is a recipient of an NSF ADVANCE institutional transformation grant to increase the participation of women in science and engineering. Case Western Reserve University is committed to diversity and is an affirmative action, equal opportunity employer. Applications from women or minorities are especially encouraged.

CLAREMONT GRADUATE UNIVERSITY - SCHOOL OF MATHEMATICAL SCIENCES - An applied mathematician with a strong background in mathematical finance and financial engineering is sought for a tenure-track or tenured appointment starting July 2005. The rank is open, depending on qualifications, and is subject to final budgetary approval. An outstanding record of research, the ability to develop grant support from government or industry sources, and willingness to assume a leadership role in the school are required for a senior appointment. The successful candidate will primarily support the MS and Ph.D. programs in Financial Engineering, operated jointly with the Peter F. Drucker and Masatoshi Ito Graduate School of Management. CGU is a member of the Claremont Colleges, a consortium of 7 private colleges that together employ over 45 mathematicians. The masters and Ph.D. programs emphasize applied mathematics, and the school operates an Engineering and Industrial Mathematics Clinic, in which faculty and students gain experience in industrial project work. The school also has a joint Ph.D. with CSU Long Beach in engineering / industrial applied mathematics, a joint Ph.D. with San Diego State University in computational science, and a Ph.D. program in computational and systems biology in collaboration with the Keck Graduate Institute. More information is available at www.cgu.edu/math and www.cgu.edu/fineng. Applicants should send a cover letter, statements of research interests and teaching philosophy, CV, evidence of teaching ability, and a list of names of at least 3 references to **Search, School of Mathematical Sciences, 710 N. College Avenue, Claremont, CA 91711**. Claremont Graduate University is an Equal Opportunity / Affirmative Action Employer. Review of applications will begin immediately and continue until the position is filled.

CLARKSON UNIVERSITY – DEPARTMENT OF MATHEMATICS - The Division of Mathematics and Computer Science invites applications for a tenure-track position starting August 2005 in computational dynamical systems. (All areas of applied mathematics considered). Responsibilities: teaching undergraduate and graduate courses, directing graduate students. Minimum requirements: Ph.D. in mathematics, excellent research potential and teaching ability, fluency in English, ability to interact with others in department and university. See www.clarkson.edu/mcs. Applications including vita and three reference letters to **Prof. P.A. Turner, MCS Department, Clarkson University, Potsdam, NY 13699-5815**. Applications will be reviewed starting immediately. Women and minorities are urged to apply. Clarkson University is an AA/EOE Employer.

CLEVELAND STATE UNIVERSITY – DEPARTMENT OF MATHEMATICS - Applications are invited for two tenure-track positions at the level of assistant professor or higher to begin August 15, 2005. Applicants should have demonstrated strong potential in research and a commitment to excellent teaching. Post-doc experience is desirable. Candidates whose research is compatible with the department's research expertise which lies in differential equations, differential geometry, dynamical systems, mathematical physics and topology and includes the computational aspects of these research areas are encouraged to apply. We are especially interested in applicants with expertise in geometric or harmonic analysis, inverse problems, or numerical analysis. Applications should include a curriculum vita with publication list, a statement of future research plans, and at least three letters of recommendation. The AMS Standard Cover Sheet should be completed online at **http://www.mathjobs.org**. Applicants are encouraged to submit all their materials electronically at http:www.mathjobs.org. Review of applications will begin December 1, 2004. For more information about the department please visit **http://www.math.uab.edu**. UAB is an AA/EO employer.

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COLLEGE OF STATEN ISLAND - DEPARTMENT OF MATHEMATICS - Two anticipated Assistant Professor tenure-track positions in Pure Mathematics. Required: PhD in mathematics, demonstrated commitment to research, publication, and teaching. Candidates working in the research areas of algebra, analysis, logic, probability theory, or topology encouraged to apply. Responsibilities: teaching, performing department and college service,engagement in an active and productive research program. The successful candidate will present credentials appropriate for appointment to the doctoral faculty of the CUNY Graduate School. Salary range: $47,331 - $61,111 commensurate with qualifications. Review of applications will begin on December 15, 2004 and continue until the position is filled. Send an AMS coversheet, curriculum vitae, short description of current and planned research, short statement on teaching experience and philosophy, and at least three letters of recommendation (sent separately) to: **Prof. J.D. Hamkins, Chair, Pure Mathematics Search Committee, Department of Mathematics, College of Staten Island, 2800 Victory Blvd., Rm. 1S-215, Staten Island, NY 10314.** EEO/AA/ADA employer.

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 3 terms. Appointment for 26 months and is not renewable; monthly salary of $4,350.00 which includes two-month research stipend for Instructors in residence during 2 of 3 summer months in 2006 and 2007; if not in residence, salary adjusted accordingly. Applications may be obtained 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 03755-3551.** Files complete by January 5, 2005 considered first. Dartmouth College is committed to diversity and strongly encourages applications from women and minorities.

DARTMOUTH COLLEGE - DEPARTMENT OF MATHEMATICS - Tenure-track Assistant Professorship with initial appointment in the 2005-2006 academic year, in Applied Mathematics. In extraordinary cases, an appointment at a higher rank is possible. Candidates need ability to work across disciplines, in particular, to strike up collaborations across campus with departments such as biology, physics or computer science. Current applied interests include (but are not limited to) imaging, signal processing, computational number theory, statistical physics, stochastic processes, quantum computing and computational biology and are receiving funding from various sources including NSF and NIH. Teaching responsibility is three courses spread over three of four ten-week terms. New faculty members offered grants for research-related expenses and a quarter of sabbatical leave for each three academic years in residence. Applications may be obtained 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 December 15, 2004 considered first. Women and minorities are particularly encouraged to apply.

DARTMOUTH COLLEGE - DEPARTMENT OF MATHEMATICS - Tenure-track Mathematics Assistant Professorship beginning 2005-2006. In extraordinary cases, an appointment at a higher rank is possible. Candidates should be working in either set theory/logic or areas of algebra with connections to existing research interests in the department. Examples include computational algebra, algebraic and arithmetic geometry, algebraic combinatorics, representation theory, and coding theory. In exceptional circumstances, other research areas may be considered. Must have strong commitment to outstanding teaching and interaction with students at all levels of undergraduate and graduate study. Teaching responsibility is three courses spread over three of four ten-week terms. New faculty members offered grants for research-related expenses and a quarter of sabbatical leave for each three academic years in residence. Applications may be obtained at http://www.math.dartmouth.edu/recruiting/,or, send application letter, vita, research statement, four recommendation letters (one teaching), to **Donna Black, Department of Mathematics, Dartmouth College, 6188 Bradley Hall, Hanover, NH 03755-3551.** Applications completed by December 15, 2004 considered first. Women and minorities encouraged to apply.

DREXEL UNIVERSITY - DEPARTMENT OF MATHEMATICS - Tenure-track/tenure positions - The Department of Mathematics at Drexel University invites applications for at least two tenure-track/tenure positions, effective September 2005. The University is committed to strong growth in the Mathematics Department following the recent hire of a new department head. We are especially interested in candidates in (i) Applied Matrix and Operator Theory (ii) Biomathematics (iii) Financial and Actuarial Mathematics (iv) Statistics (v) Mathematics Education, though exceptional candidates in other areas will be considered as well. Our hiring strategy allows for the possibility of making multiple hires in the same area in the case of a cohesive group of researchers. Applicants must possess a doctoral degree in mathematics, statistics, or equivalent and show a strong record and commitment to teaching and research. Applicants for senior positions should demonstrate an outstanding record of achievement commensurate with the level of appointment, including a track record of external support and research group leadership. Drexel University is a private, urban university, with over 10,000 full-time undergraduates and is well-known for its co-operative education program. The Mathematics Department offers undergraduate, masters and PhD degrees. Send letter of application, vita, statement of research program and evidence of teaching effectiveness and arrange to have at least three letters of reference sent to **Math Search Committee, Department of Mathematics, Drexel University, Philadelphia, PA 19104.** Phone: 215-895-2668; fax: 215-895-1582; E-mail: mathsearch@drexel.edu URL: www.math.drexel.edu. Review of applications will begin December 15, 2004 and continue until the positions are filled. Drexel University is an Equal Opportunity/Affirmative Action Employer.

DUKE UNIVERSITY - DEPARTMENT OF MATHEMATICS - Postdoctoral Position in Applied Mathematics - Applications are invited for a position as a postdoctoral research associate in Applied Mathematics at Duke University. The position is to begin August 1, 2005 and may be renewed for up to a total of two years. Candidates should have received a doctorate in applied or computational mathematics, or closely related disciplines. This position is being funded through a National Science Foundation CAREER grant to Assistant Professor Thomas Witelski focusing on the study of thin films of viscous fluids and the dynamics of microfluidic transport. Hence, candidates with research interests in analysis or numerical solution of problems in fluid dynamics will be given highest priority. The research associate will primarily work with Witelski and the existing thin films research group at Duke (for more information, see http://www.math.duke.edu/~witelski/thinfilms/). The position also entails some teaching of applied mathematics courses to provide for the career development of the candidate with regard to teaching experience. Excellent salary and benefits commensurate with experience and skills are available. Applicants should submit: (i) an AMS standard cover sheet, (ii) a vita with a publication list and any teaching experience, (iii) a description of current research interests and career plans, and (iv) at least three letters of recommendation. The AMS Standard Cover Sheet should be completed online at www.mathjobs.org/jobs/duke/. Applicants are encouraged to submit their other materials electronically at this site; they may also mail them to: **Thomas Witelski, Department of Mathematics, Box 90320, Duke University, Durham, NC 27708-0320**. Duke University is an affirmative action/equal opportunity employer. Applications will be reviewed until the position is filled. E-mail inquiries: witelski@math.duke.edu. Application Material Required: Submit the following item(s) online at this web site: 3 Reference Letters, 1 Cover Letter, 1 Curriculum Vitae, 1 Publication List, 1 Research Statement, and anything else requested in the job description.

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DUKE UNIVERSITY - DEPARTMENT OF MATHEMATICS - Two Assistant Research Professorships, 2005-2008 - Applications are invited for two positions as Assistant Research Professor of Mathematics. Candidates should have completed a doctorate as of September 1, 2005 and show definite promise in research and teaching. The teaching load will be two courses during one semester and one course during the other, so that the appointee will have additional time for research. The appointments are for one year and are renewable for two additional years; they begin on September 1, 2005. Applicants are asked to submit (a) an AMS standard cover sheet; (b) a vita; (c) a description of current and past research (1-3 pages); (d) a plan for future research, and have at least four letters of recommendation, including one which evaluates teaching, sent directly to Duke by mid January. Each applicant is also requested to include in their materials the name(s) of one or more members of the faculty of the Department of Mathematics at Duke working in their general area of research. The AMS Standard Cover Sheet should be completed online at www.mathjobs.org/jobs/duke/. Applicants are encouraged to submit their other materials electronically at this site; they may also mail them to: **Appointments Committee, Department of Mathematics, Box 90320 Duke University, Durham, NC 27708-0320**. Applications received by January 1, 2005 will be guaranteed full consideration; early application is advisable. Duke University is an affirmative action/equal opportunity employer. E-mail inquiries: appts@math.duke.edu; Departmental home page: www.math.duke.edu. Application Material Required: Submit the following item(s) online at this web site: 4 Reference Letters, 1 Cover Letter, 1 Curriculum Vitae, 1 Research Statement, 1 Teaching Statement, and anything else requested in the job description.

DUKE UNIVERSITY - DEPARTMENT OF MATHEMATICS - Visiting Positions in Mathematics - The Department may hire one or two visitors for one or two years, starting in Fall, 2005. Candidates should have completed a doctorate as of September 1, 2005 and show promise in research and teaching. The teaching load will be two courses per semester. The appointment will begin on September 1, 2005. Applicants are asked to submit (a) an AMS standard cover sheet; (b) a vita; (c) a description of current and past research (1-3 pages); (d) a plan for future research, and have at least four letters of recommendation, including one which evaluates teaching, sent directly to Duke by mid January. Each applicant is also requested to include in their materials the name(s) of one or more members of the faculty of the Department of Mathematics at Duke working in their general area of research. The AMS Standard Cover Sheet should be completed online at www.mathjobs.org/jobs/duke/. Applicants are encouraged to submit their other materials electronically at this site; they may also mail them to: **Appointments Committee, Department of Mathematics, Box 90320 Duke University, Durham, NC 27708-0320**. Applications received by January 31, 2005 will be guaranteed full consideration; early application is advisable. Duke University is an affirmative action/equal opportunity employer. E-mail inquiries: appts@math.duke.edu; Departmental home page: www.math.duke.edu. Application Material Required: Submit the following item(s) online at this web site: 4 Reference Letters, 1 Curriculum Vitae, 1 Publication List, 1 Research Statement, 1 Teaching Statement and anything else requested in the job description.

FRAMINGHAM STATE COLLEGE – DEPARTMENT OF MATHEMATICS - The Department invites applications for a tenure-track position beginning September 2005. Applicants must have a Ph.D. in mathematics, statistics, or mathematics education by June 15, 2005, show evidence of a strong commitment to excellence in teaching and a commitment to continued scholarly and professional growth. The successful candidate would teach courses throughout the mathematical curriculum including lower-level courses. The responsibilities include a teaching load of three four-credit courses per semester, advising, and service to the college community. Please see **www.framingham.edu/humanresources** for more details. The deadline for completed applications is December 31, 2004

GEORGIA COLLEGE & STATE UNIVERSITY – DEPARTMENT OF MATHEMATIC AND COMPUTER SCIENCE - The Department of Mathematics and Computer Science of Georgia College & State University invites applications for a tenure track position in mathematics education. Appointment will be at the Assistant or Associate Professor level and commensurate with qualifications. The successful applicant will play a key role as liaison with the School of Education and provide leadership in the Math and Science Partnership with area school systems. Teaching duties will include courses at the undergraduate and graduate levels. A terminal degree in mathematics education or related field is required by the time of initial appointment. An interest in working with prospective and in-service teachers of elementary and middle grades is preferred. Excellence in teaching, scholarship, and service is required for tenure and promotion. Employment would begin August 2005. A selective university of approximately 5,600 students, Georgia College & State University (www.gcsu.edu) is located in Milledgeville, GA, a historic community convenient to both Macon and Atlanta. As the state's only public liberal arts university, GC&SU is committed to combining the educational experiences typical of esteemed private liberal arts colleges with the affordability of public higher education. GC&SU is a residential learning community that emphasizes undergraduate education and offers select graduate programs. Please send a letter of application, including statements on scholarship and teaching, curriculum vita, copies of graduate transcripts, and three letters of recommendation (at least one of which addresses teaching) to: **Mathematics Education, Search Chair, Department of Mathematics and Computer Science, CBX 017, Georgia College & State University, Milledgeville, GA 31061**. Applications will be reviewed beginning December 8, 2004 and continue until the position is filled. More information about the position may be found at www.gcsu.edu/facultyjobs. GC&SU is an Equal Opportunity/Affirmative Action Employer.

GETTYSBURG COLLEGE DEPARTMENT OF MATHEMATICS - Two Tenure-Track Positions in Mathematics - Gettysburg College invites applicants for two tenure-track positions in mathematics beginning August 2005. One of the two positions is restricted to the general area of applied mathematics or statistics, with a special interest in a scholar whose work links mathematics and biology. The specialization for the other position is open and individuals From all research areas are invited to apply. While the positions are targeted at the Assistant Professor level, others might be considered. Applicants must have a Ph.D. in mathematics, applied mathematics, or statistics or expect to complete all requirements for this degree by September 2005. Promise of excellence in teaching and commitment to a vigorous research program are essential. A successful candidate will have the opportunity to teach a broad range of undergraduate mathematics courses and to involve undergraduate students in mathematical activity outside the classroom. Gettysburg College is a highly selective liberal arts college located within 90 minutes of the Baltimore/Washington metropolitan area. Established in 1832, the College has a rich history and is situated on a 220-acre campus with an enrollment of 2,500 students. Gettysburg College celebrates diversity and invites applications from members of any group that has been historically underrepresented in the American academy. The College assures equal employment opportunity and prohibits discrimination on the basis of race, color, national origin, gender, religion, sexual orientation, age, and disability. For more information about us and the position, please visit http://www.gettysburg.edu/academics/math/applicant_information.html. Please send a letter of application explaining your interest in our department, a curriculum vitae, a brief description of your teaching methods and objectives, and a summary of your research goals to: **Mathematics Search Committee, Department of Mathematics, Gettysburg College, Gettysburg, PA 17325**. Also arrange for the committee to receive three letters of recommendation addressing teaching effectiveness and research potential. Completed applications received by December 1, 2004, will receive full consideration.

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GOUCHER COLLEGE – DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE - Assistant Professor - A tenure track position is available at the assistant professor level for Fall 2005, pending final approval in October 2004. Ph.D. required in mathematics, with a specialization in the fields of applied mathematics or probability preferred. Additional requirements: a commitment to excellence in teaching; the ability to teach a wide variety of courses and conduct a research program; a commitment to fostering research by undergraduates. The position also includes opportunities to develop courses for the college's first year program and courses with interdisciplinary and international emphases. Preference will be given to qualified candidates who are interested in participating in such programs. The ability to teach introductory level computer science courses is a plus. Deadline for applications: January 7, 2005. Informal interviews will be conducted at the AMS/MAA meetings in January. Submit vitae, transcripts of graduate work, three letters of recommendation (two of which must address teaching experience or potential), and a personal statement describing your interest in teaching at a small liberal arts college and also briefly describing your research to: **Human Resources, Goucher College, 1021 Dulaney Valley Road, Baltimore, MD 21204**. Goucher College is an Equal Opportunity Employer.

INDIANA UNIVERSITY BLOOMINGTON - DEPARTMENT OF MATHEMATICS - Tenure-Track or Higher - The Department of Mathematics invites applications for tenure-track or higher-level positions beginning in the Fall of 2005. Outstanding candidates with a Ph.D. in any area of pure or applied mathematics or statistics and with postdoctoral or faculty-level experience are encouraged to apply. The teaching load for research-active faculty is three semester-courses per year. The Department maintains strong research groups in all principal fields of mathematics, and the Bloomington campus offers a rich variety of musical and cultural attractions. Interested applicants should send a letter of application, vita, and research and teaching statements, and should arrange to have at least four letters of recommendation, including one letter evaluating teaching experience, sent to: **Search Committee, Department of Mathematics, Indiana University, Rawles Hall, Bloomington, IN 47405-7106.** Applications should be received by November 15, 2004. Indiana University is an affirmative action and equal opportunity employer.

INDIANA UNIVERSITY BLOOMINGTON - DEPARTMENT OF MATHEMATICS - Zorn Research Postdoctoral Fellowships - The Department of Mathematics invites applications for Zorn Research Postdoctoral Fellowships beginning in the Fall of 2005. These are three-year, non-tenure track positions with reduced teaching loads. Outstanding candidates with a recent Ph.D. in any area of pure or applied mathematics or statistics are encouraged to apply. Zorn postdocs are paired with mentors with whom they have compatible research interests. The Department maintains strong research groups in all principal fields of mathematics, and the Bloomington campus offers a rich variety of musical and cultural attractions. Interested applicants should send a letter of application, vita, and research and teaching statements, and should arrange to have four letters of recommendation, including one letter evaluating teaching experience, sent to**: Zorn Postdoctoral Fellowships Search Committee, Department of Mathematics, Rawles Hall, Indiana University, Bloomington, IN 47405-7106.** Applications should be received by January 1, 2005. Indiana University is an affirmative action and equal opportunity employer.

INDIANA UNIVERSITY OF PENNSYLVANIA – DEPARTMENT OF MATHEMATICS - Mathematics Faculty Positions - Indiana University of Pennsylvania's Mathematics Department invites applications for tenure track faculty positions in Mathematics, Statistics, and Research in undergraduate mathematics education to begin in fall of 2005. A Ph. D. in the appropriate field is required. Review of applications begins December 1, 2004 and continues until positions are filled or closed. All applicants must be work eligible. For job descriptions, requirements, and application procedures, log on to **http://www.math.iup.edu/jobs**, e-mail Gary.Stoudt@iup.edu or call 724-357-2608. Indiana University of Pennsylvania, a member of the State System of Higher Education, is an equal opportunity employer M/F/H/V.

JOHNS HOPKINS UNIVERSITY - DEPARTMENT OF MATHEMATICS - Subject to availability of resources and administrative approval, the following positions are available for the 2005-06 academic year. 1.) One Tenure-track or tenured positions in all areas of pure mathematics. 2.) One non-tenure track J. J. Sylvester Assistant Professor. 3.) One FRG postdoc position: This is open to mathematicians who have recently completed or will soon complete a doctorate in mathematics and whose research interests concern Eigenfuncitons of the Laplacian. For questions, send an 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, 2004 will be given priority. Johns Hopkins University is an Affirmative Action /Equal Opportunity Employer. Minorities and women candidates are encouraged to apply. See our ad online at http://www.mathematics.jhu.edu/mathnew/jobs.html

KANSAS STATE UNIVERSITY - DEPARTMENT OF MATHEMATICS – Instructorship - Subject to budgetary approval, applications are invited for an instructorship commencing between May 1 and Aug. 15, 2005. The instructor will participate in the design and implementation of a collaborative program to improve teacher preparation and will have time to pursue research in the department along with these duties. Applicants must have a commitment to excellence in teaching. A Ph.D. in mathematics or a Ph.D. dissertation accepted with only formalities to be completed is required. Experience in mathematics education, teaching with technology, distance learning, and/or experience with students of limited English proficiency (especially Spanish speakers) is preferred. Letter of application, current vita, three letters of reference, and a statement of teaching philosophy should be sent to: **Louis Pigno, Department of Mathematics, Cardwell Hall 138, Kansas State University, Manhattan, KS 66506**. Screening will begin on Dec. 15, 2004, but applications for the position will be reviewed until the position is filled. Kansas State University is an Equal Opportunity Employer

KANSAS STATE UNIVERSITY - DEPARTMENT OF MATHEMATICS – Tenure Track position - Subject to budgetary approval, applications are invited for tenure-track positions commencing August 14, 2005; rank and salary commensurate with qualifications. The Department seeks candidates whose research interests mesh well with current faculty. The Department has research groups in the areas of analysis, algebra, geometry/topology, and differential equations. Applicants must have strong research credentials as well as strong accomplishment or promise in teaching. Letter of application, current vita, description of research, and at least three letters of reference evaluating research should be sent to: **Louis Pigno, Department of Mathematics, Cardwell Hall 138, Kansas State University, Manhattan, KS 66506**. The Department also requires that the candidate arrange for letters to be submitted evaluating teaching accomplishments and potential. Offers may begin by December 1, 2004, but applications for positions will be reviewed until February 1, 2005, or until positions are closed. AA/EOE

MASSACHUSETTS INSTITUTE OF TECHNOLOGY - DEPARTMENT OF MATHEMATICS –The Department of Mathematics may make appointments at the level of lecturer and assistant professor or higher, in pure mathematics for the year 2005-2006. The teaching load will be nine hours for the academic year (eight hours for assistant professor appointments). These positions are open to mathematicians with doctorates who show definite promise in research. Applicants should (a) submit a vita and a description of their most recent research and future plans; and (b) arrange for three letters of reference to be sent directly. Deadline: January 10, 2005. Address: **Pure Mathematics Committee, Massachusetts Institute of Technology, Room 2-263, 77 Massachusetts Ave., Cambridge, MA 02139-4307**. MIT is an Equal Opportunity, Affirmative Action Employer.

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MASSACHUSETTS INSTITUTE OF TECHNOLOGY – DEPARTMENT OF MATHEMATICS - Applied Mathematics - The applied mathematics group is seeking to fill possible positions at the level of instructor, assistant professor or higher, beginning September 2005. Appointments will be made based on demonstrated outstanding research qualifications. Candidates in all areas of applied mathematics, including physical applied mathematics, computational molecular biology, numerical analysis and scientific computation, will be considered. Current activities of the group include: combinatorics, operations research, theory of algorithms, numerical analysis, astrophysics, condensed matter physics, computational physics, fluid dynamics, geophysics, nonlinear waves, theoretical and computational molecular biology, quantum computing, quantum field theory and material science; but new hiring may involve other areas. Applicants should (a) submit a vita and a description of their most recent research and future science; but new hiring may involve other areas. Applicants should (a) submit a vita and a description of their most recent research and future plans; and (b) arrange for three letters of reference to be sent directly. Deadline: January 10, 2005. Address: **Applied Mathematics Committee, Massachusetts Institute of Technology, Room 2-345, 77 Massachusetts Ave., Cambridge, MA 02139-4307**. MIT is an Equal Opportunity, Affirmative Action Employer.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY – DEPARTMENT OF MATHEMATICS - C.L.E. Moore Instructorships in Mathematics - These positions are open to mathematicians with doctorates who show definite promise in research. The teaching load will be nine hours for the academic year. Applicants should (a) submit a vita and a description of their most recent research and future plans; and (b) arrange for three letters of reference to be sent directly. Deadline: January 10, 2005. Address: **Pure Mathematics Committee, Massachusetts Institute of Technology, Room 2-263, Cambridge, MA 02139-4307**. MIT is an Equal Opportunity, Affirmative Action Employer.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY – DEPARTMENT OF MATHEMATICS – Statistics - The Department of Mathematics may make appointments at the level of instructor or higher in STATISTICS or APPLIED PROBABILITY starting September 2005. Open to doctorates with strong research and teaching qualifications. Applicants should (a) submit a vita and a description of their most recent research and future plans; and (b) arrange for three letters of reference to be sent directly. Deadline: January 10, 2005. Address: Statistics Committee, Massachusetts Institute of Technology, three letters of reference to be sent directly. Deadline: January 10, 2005. Address: **Statistics Committee, Massachusetts Institute of Technology, Room 2-263, 77 Massachusetts Ave., Cambridge, MA 02139-4307**. MIT is an Equal Opportunity, Affirmative Action Employer.

MERCER UNIVERSITY - DEPARTMENT OF MATHEMATICS - Assistant Professor - The Department of Mathematics at Mercer University invites applications for a position at the level of Assistant Professor of Mathematics. A Ph.D. in mathematics or the mathematical sciences is required. The position begins in August 2005. Duties include teaching approximately 21 semester hours of mathematics courses per year plus departmental duties as assigned by the Chair and college duties as assigned by the Dean. The successful candidate will have completed a Ph.D. in mathematics, show potential for excellence in teaching mathematics at a liberal arts college, show potential for ongoing scholarship, and demonstrate an ability to contribute to the development of programs in the department (e.g., curriculum development and undergraduate research). A lively interest in teaching an interdisciplinary course outside of the department will be considered a plus in evaluating candidates. Apply online at **www.mercerjobs.com**. Review of applications will begin November 29, 2004, and will continue until the position is filled. Department representatives will attend the Employment Center at the Joint Meetings in January. AA/EOE/ADA

MICHIGAN STATE UNIVERSITY, - DEPARTMENT OF MATHEMATICS - Pending budgetary approval, the Department will have a tenure track position to begin Fall 2005. It is expected that successful applicants will be appointed at the rank of Assistant Professor, but truly outstanding candidates for appointment at higher ranks will be considered. Excellence is essential in both research and teaching, and it is expected that the successful candidate will have at least two years of experience beyond the Ph.D. While outstanding applicants from all mathematical research areas may be considered, preference will be given to those with significant research accomplishments in interdisciplinary mathematics, especially in scientific computation as applied to nano-science, biological, optical/electromagnetic, or materials science. Application information: An applicant should send a vita as well as a brief statement of research interests, and arrange for at least four letters of recommendation to be sent, one of which must specifically address the applicant's ability to teach. Application via email is strongly encouraged. To learn more about the application process, please visit **http://www.mth.msu.edu/Hiring** . Application materials can also be addressed to **The Hiring Committee, Department of Mathematics, Michigan State University, East Lansing, MI 48824-1027.** Completed applications (including letters of recommendation) received by November 15, 2004 are assured of consideration, but applications will be considered until the position is filled. Women and minorities are strongly encouraged to apply. MSU is an Affirmative Action/Equal Opportunity Institution. Handicappers have the right to request and receive reasonable accommodation. http://www.math.msu.edu.

MICHIGAN STATE UNIVERSITY – DEPARTMENT OF STATISTICS AND PROBABILITY – The Department of Statistics and Probability at Michigan State University invites applications for a tenure track position at the rank of Assistant Professor (in an exceptional case, Associate Professor may be considered) to start August 16, 2005. 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 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 15, 2004 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

MILLERSVILLE UNIVERSITY – DEPARTMENT OF MATHEMATICS - Full-time, tenure-track assistant professorship to begin August 2005. Area of expertise in real or functional analysis. The department, consisting of 20 faculty members and approximately 200 undergraduate majors, offers B.A. and B.S. degrees in mathematics and B.S.Ed and M.Ed. degrees in mathematics education. Duties include an annual 24-hour teaching load, including a variety of undergraduate mathematics service courses, scholarly activity, student advisement, supervision of student research, curriculum development and committee work. Ph.D. (or completion by time of reappointment to the second year) in mathematics with specialization in real or functional analysis is required. Must exhibit evidence of strong commitment to excellence in teaching and continued scholarly activity. Must be prepared to teach a broad spectrum of undergraduate mathematics courses and have potential to contribute to the department's programs. Must complete a successful interview and teaching demonstration. Evidence of teaching effectiveness is a primary consideration. Salary/benefits are competitive. Send application letter, vita, copies of undergraduate and graduate transcripts and three letters of reference (at least two of which attest to recent teaching effectiveness) to **Dr. Zhoude Shao, Search Committee/AWM, Department of Mathematics, Millersville University of Pennsylvania, P.O. Box 1002, Millersville, PA 17551-0302**. Completed application must be received by **January 21, 2005** to assure full consideration. An EO/AA Institution. E-mail applications will not be accepted.

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NEW MEXICO INSTITUTE OF MINING AND TECHNOLOGY - DEPARTMENT OF MATHEMATICS - Seeks applicants for two-tenure track positions as Assistant Professor of Mathematics beginning in Fall of 2005. New Mexico Tech offers bachelors, Master's, and Ph.D. degrees in mathematics. Our MS program has options in Industrial Mathematics and in Operations Research and Statistics; the Ph.D. program is in Applied & Industrial Mathematics. Mathematics faculty also have directed Ph.D. students in other departments, including Physics, Hydrology, and Computer Science. Field of interest within the department include modeling, numerical analysis, mathematical physics, optimization, statistics, fluid dynamics and dynamical systems. The successful applicant will normally teach five courses per year, primarily in their area of interest, and mostly at the junior through graduate level. Teaching load reductions are available for those supervising graduate students, or through research grants. Service to the Mathematics Department and the Institute, advising students and developing a research program are also expected. Minimum qualifications are a Ph.D. in mathematics or equivalent required, and must have been completed by January 1, 2005. The successful candidate must also have computer skills, a strong record of teaching excellence, evidence of strong research potential, and excellent oral and written English communication skills. One position is available in Discrete Mathematics. Preference will be given to those whose research interests are in graph theory, cryptography, or combinatorial optimization. The other position is Applied Mathematics. Preference will be given to those whose research interests complement existing strengths in the department, while adding expertise that will strengthen the newly established Ph.D. program. For information about New Mexico Tech, visit our web page http://www.nmt.edu/. For information about the position or institution, visit http://externalweb.nmt.edu/hr/. The starting date is August 15, 2005. To receive full consideration, applications must be received prior to January 15, 2005. Send AMS cover sheet, available at http://www.ams.org/coversheet/, CV (which should include the names, daytime telephone numbers, and e-mail addresses of three (3) references), teaching evaluations (if available), transcripts, reprints, and a letter describing your teaching philosophy and research interests. Please have 3 letters of recommendation sent directly. Send all materials to **New Mexico Institute of Mining and Technology, Human Resources, Wells Hall, Box 104A (Applied) or 104D (Discrete) Please be sure to specify Applied or Discrete., Socorro, NM 87801.** AAEOE. Email applications NOT accepted.

NORTH CAROLINA STATE UNIVERSITY – DEPARTMENT OF MATHEMATICS - Applications are invited for a tenure-track position at the assistant professor level beginning Fall 2005. Applicants in all areas of pure and applied mathematics of interest to members of the department will be considered. Applicants should have a doctorate in mathematics, successful postdoctoral experience, an outstanding research program, and a commitment to effective teaching at the undergraduate and graduate levels. The department has strong research programs in both pure and applied mathematics, and significant collaborations with other departments, institutions, and industry. Information about the department may be found at http://www.math.ncsu.edu. Applicants should send a vita, research plan and three letters of recommendation to **Mathematics Search Committee, Department of Mathematics, NC State University, Box 8205, Raleigh, NC 27695-8205.** NC State University is an Equal Opportunity and Affirmative Action Employer. In addition, NC State welcomes all persons without regard to sexual orientation. ADA Accommodations: Dr. Jean-Pierre Fouque, fouque@math.ncsu.edu, (919) 515-2382. Complete applications received before December 31, 2004 will receive full consideration.

NORTHEASTERN UNIVERSITY – DEPARTMENT OF MATHEMATICS - Assistant Professorship in Mathematics - We invite applications for a tenure-track position at the Assistant Professor level, pending budgetary approval, to begin in September of 2005. Outstanding candidates from any area of pure or applied mathematics are encouraged to apply, in particular those in the fields of algebra, analysis, combinatorics, and geometry. Special consideration will be given to applicants with an interest in interdisciplinary work, and with expertise in computational or numerical methods. Applications, including a curriculum vitae, a statement of current research plans and teaching interests, and a completed AMS standard cover sheet, as well as three letters of recommendation, should be sent to the following address: **Chair of the Hiring Committee, Department of Mathematics, Northeastern University, 567 Lake Hall, Boston, MA 02115.** Candidates must possess a Ph.D. before the start date. The evaluation of candidates will begin immediately. Applications received by January 15, 2005 will be given priority. Northeastern University is an Equal Opportunity/Affirmative Action, Title IX, educational institution and employer that strongly encourages applications from women and minority candidates.

OCCIDENTAL COLLEGE – DEPARTMENT OF MATHEMATICS – *[see display advertisement on page 35]*

THE OHIO STATE UNIVERSITY - DEPARTMENT OF MATHEMATICS - The Department of Mathematics in the College of Mathematical and Physical Sciences at The Ohio State University expects to have openings at both the **junior and senior level in the area of mathematical and computational biology**, effective Autumn Quarter 2005. Applicants should have a Ph.D. in mathematics or a related area, such as mathematical sciences, biomathematics, biology, chemistry, computer science, physics, and engineering, and show outstanding promise and/or accomplishments in both research and teaching. The successful candidate will be expected to teach courses in the Department of Mathematics and actively participate in the newly formed Mathematical Biosciences Institute (MBI). Further information on the department and the MBI can be found at http://www.math.ohio-state.edu and http://mbi.osu.edu. All candidates should apply online at https://www.math.ohio-state.edu/applications/ and have at least three letters of recommendation sent to: **Mathematical Biosciences Search, Department of Mathematics, The Ohio State University, 231 W. 18th Avenue, Columbus, OH 43210.** If you cannot apply online, please send vitae, research statement, and teaching statement to the above address. Applications are considered on a continuing basis but the annual review process begins November 15, 2004. Please direct inquiries to facultysearch@math.ohio-state.edu. To build a diverse workforce Ohio State encourages applications from individuals with disabilities, minorities, veterans, and women. EEO/AA Employer.

THE OHIO STATE UNIVERSITY - DEPARTMENT OF MATHEMATICS - The Department of Mathematics in the College of Mathematical and Physical Sciences at The Ohio State University expects to have **tenure-track/tenured positions** and several visiting positions available, effective Autumn Quarter 2005. 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. Further information on the department can be found at http://www.math.ohio-state.edu and http://mbi.osu.edu. All candidates should apply online at https://www.math.ohio-state.edu/applications/ 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.** If you cannot apply online, please send vitae, research statement, and teaching statement to the above address. Applications are considered on a continuing basis but the annual review process begins November 15, 2004. Please direct inquiries to facultysearch@math.ohio-state.edu. To build a diverse workforce Ohio State encourages applications from individuals with disabilities, minorities, veterans, and women. EEO/AA Employer.

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OHIO STATE UNIVERSITY - MATHEMATICAL BIOSCIENCES INSTITUTE - The Mathematical Biosciences Institute (MBI) at The Ohio State University is accepting applications for postdoctorate positions to start September, 2005, and which are renewable for up to 3 years. Some positions are co-sponsored by industry or academic bioscience labs. The MBI is an Affirmative Action/Equal Opportunity employer. The deadline for applications is January 18, 2005. Short- and long-term visitors may apply at any time. To access the application form or for more information, visit the MBI website at **http://mbi.osu.edu** or call (614) 292-3648.

REED COLLEGE – DEPARTMENT OF MATHEMATICS - The Reed College Mathematics Department invites applications for a tenure-track assistant professorship, to begin in Fall, 2005. Reed is a distinguished liberal arts college with 1200 students that offers a demanding academic program to bright and dedicated undergraduates. Applicants should be committed to excellence in teaching and have an active interest in mathematics at all levels. An applicant is expected to have a Ph.D. in mathematics or statistics by the start of the 2005-06 academic year. Faculty members teach five semester courses per year (usually two course preparations per semester) and supervise senior theses (required of all students). Further information about the positions can be found at the URL: http://www.reed.edu/mathsearch. Applicants should submit a curriculum vita and a statement of teaching and research interests, and arrange to have three letters of recommendation sent to: **Albyn Jones, Chair, Mathematics Search Committee, Mathematics Department, Reed College, 3203 S.E. Woodstock Blvd., Portland, Oregon 97202-8199.** Applications will be accepted until the position is filled, but they should be received by February 1, 2005, to guarantee full consideration. EOE.

RICE UNIVERSITY – DEPARTMENT OF MATHEMATICS – Griffith Conrad Evans Instructorship - Griffith Conrad Evans Instructorships Postdoctoral appointments for two to three years for promising research mathematicians with research interests in common with the active research areas at Rice, particularly geometric topology, geometric analysis, differential geometry, combinatorics, analysis, algebraic geometry, and ergodic theory. Duties will include research and classroom teaching. Applications received by December 15, 2004 will receive full consideration. Rice University is an Equal Opportunity Affirmative Action Employer and strongly encourages applications from women and minority group members. Inquiries and applications should be addressed to: **Chair, Evans Committee, Department of Mathematics, Rice University, PO Box 1892, Houston, TX 77251-1892.** Submitting the AMS Application Cover Sheet (available in Notices, EIMS or e-math) would be greatly appreciated. Deadline for Applications: December 15, 2004 URL For more information about the position or institution/company: http://www.math.rice.edu/About/job

RICE UNIVERSITY – DEPARTMENT OF MATHEMATICS - Tenure-Track postion - Applications are invited for a tenure-track position in the Department of Mathematics at the rank of Assistant Professor. Candidates should have extremely strong research potential and very good teaching skills. Send a curriculum vitae to: **Appointments Committee, Department of Mathematics, Rice University, P. O. Box 1892, Houston, TX 77251-1892.** In addition, please solicit at least 3 letters of reference and ask that they be sent directly to the address above. Submission of the AMS Application Cover Sheet would be greatly appreciated. Applications which are complete by December 1, 2004 will be assured full consideration. Rice University is an Equal Opportunity/Affirmative Action Employer and strongly encourages applications from women and members of underrepresented minority groups.

SCRIPPS COLLEGE – DEPARTMENT OF MATHEMATICS – Assistant Professor in Mathematifcs, Tenure-track position beginning Fall 2005 - Scripps College, a women's liberal arts college with a strong interdisciplinary tradition, invites applications for a tenure-track Assistant Professor position in Mathematics to begin in fall 2005. Ph.D. in mathematics and evidence of excellence in teaching required. We are looking for an individual with a strong commitment to undergraduate liberal arts education. Successful teaching experience and evidence of a productive research program are essential. Participation in the interdisciplinary programs of the College is desirable. Applicants should send a curriculum vitae and a statement of teaching interests and philosophy to **Chair, Mathematics Search Committee, Scripps College, 1030 Columbia Avenue, Claremont, CA 91711.** In addition, applicants should arrange three letters of recommendations to be sent, at least one of which addresses the applicant's teaching ability. **Applications will be reviewed beginning December 15, 2004** and will continue until position is filled. Scripps College is one of seven members of The Claremont Colleges cluster located 35 miles east of Los Angeles. In a continuing effort to enrich its academic environment and provide equal educational and employment opportunities, Scripps College actively encourages applications from women and members of historically underrepresented groups.

SOUTHERN ILLINOIS UNIVERSITY AT 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, 2005. 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, 2005. 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 November 22, 2004, 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 & staff and to increase its potential to serve a diverse student population. All applications are welcomed and encouraged and will receive consideration.

STANFORD UNIVERSITY – DEPARTMENT OF MATHEMATICS – Szegö Assistant Professor positions - The Department expects to make one or more Szegö assistant professor appointments. These appointments are for a term of three years beginning in September 2005. 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, (6) financial mathematics. 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 2003. 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 **Szegö Search Committee, Department of Mathematics, Stanford University, Stanford, CA 94305** by December 15, 2004. Stanford is an Affirmative Action, Equal Opportunity Employer.

STANFORD UNIVERSITY - DEPARTMENT OF MATHEMATICS – Tenure-track or tenure - The Department is considering applications for a tenure-track or tenured faculty appointment beginning September 2005. 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. 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, 2005. Stanford is an Affirmative Action, Equal Opportunity Employer.

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SUNY POTSDAM - DEPARTMENT OF MATHEMATICS - SUNY Potsdam invites applications for one anticipated full-time tenure track position in the Mathematics Department, effective September 1, 2005, at the rank of Assistant Professor. Responsibilities of the position include teaching twelve hours per semester of undergraduate through first year graduate courses in mathematics. Ph.D. in any area of mathematics with a strong interest in and preparation for teaching undergraduate major mathematics courses required. Candidates from all areas are encouraged to apply. Applications, which must include a letter of interest, a teaching statement, a curriculum vitae, three letters of recommendation (at least one of which addresses teaching experience and abilities), and a transcript (a copy is acceptable) should be sent to **Dr. Joel Foisy, Department of Mathematics, SUNY Potsdam, Potsdam, NY 13676** (foisyjs@potsdam.edu). To ensure full consideration, complete applications must be received by January 18, 2005. For information about the College and the Department, you may go to http://www.potsdam.edu. SUNY Potsdam is an equal opportunity employer committed to excellence through diversity.

TEXAS A&M UNIVERSITY - THE DEPARTMENT OF MATHEMATICS - The Department of Mathematics is in the second year of an aggressive hiring plan to increase its tenure and tenure-track faculty by 25% over the next several years. As part of this effort, we anticipate several openings for tenured, tenure-eligible, and visiting faculty positions beginning fall 2005. 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. Senior Visiting Positions may be for a semester or one year period. For full consideration, the complete dossier should be received by December 15, 2004. 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 equal opportunity employer. The University is dedicated to the goal of building a culturally diverse and pluralistic faculty and staff committed to teaching and working in a multicultural environment and strongly encourages applications from women, minorities, individuals with disabilities, veterans. The University is responsive to the needs of dual career couples.

TOWSON UNIVERSITY- DEPARTMENT OF MATHEMATICS - Tenure-Track Assistant Professor Positions in Mathematics Education - The Department of Mathematics at Towson University seeks to fill two full-time tenure track faculty positions in mathematics education at the rank of Assistant Professor beginning Fall 2005 semester. The salary is competitive. Applicants must have an earned doctorate in mathematics education or mathematics, with experience in K-12 education. Applicants must possess a commitment to teaching, a plan for an active scholarship, and the ability to teach a variety of courses, some of which require the use of educational technology. For one of the positions, preference will be given to applicants with teaching or curricular experience in middle school mathematics. Applicants should submit a letter of application, a resume, examples of scholarship, a statement of teaching experience and philosophy, and a copy of both the undergraduate and graduate transcripts. They should arrange to have three letters of recommendation, addressing both teaching and research sent to: **Dr. Maureen Yarnevich, Chairperson, Mathematics Education Search Committee, Department of Mathematics, Towson University, 8000 York Road, Towson, MD 21252-0001**. Applications or material sent by e-mail or facsimile will not be considered. Review of materials will begin December 15, 2004, and continue until the position is filled. The Department of Mathematics (http://www.towson.edu/math/) offers bachelor's degree programs in pure mathematics, applied mathematics, actuarial science and risk management, and mathematics education. Master's degree programs are offered in applied and industrial mathematics, and mathematics education (at both the secondary school and middle school levels). Towson University is an equal opportunity/affirmative action employer and has a strong institutional commitment to diversity. Women, minorities, persons with disabilities, and veterans are encouraged to apply.

TUFTS UNIVERSITY - DEPARTMENT OF MATHEMATICS - Applications are invited for an **Assistant Professorship (non-tenure track)** to begin September 1, 2005. Initial one year contract, renewable to a maximum of three years. Ph.D., promise of strong research and evidence of strong teaching ability are required. Research area preferred: Geometric Group Theory. The teaching load will be two courses per semester. Applicants should send a curriculum vitae and have three letters of recommendation sent to **Zbigniew Nitecki, Search Committee Chair, Department of Mathematics, Tufts University, Medford, MA 02155**. Review of applications will begin January 25, 2005 and continue until the position is filled. Tufts University is an Affirmative Action/Equal Opportunity employer. We are committed to increasing the diversity of our faculty. Members of underrepresented groups are strongly encouraged to apply.

UNIVERSITY OF ALABAMA, BIRMINGHAM – DEPARTMENT OF MATHEMATICS - Applications are invited for two tenure-track positions at the level of assistant professor or higher to begin August 15, 2005. Applicants should have demonstrated strong potential in research and a commitment to excellent teaching. Post-doc experience is desirable. Candidates whose research is compatible with the department's research expertise – which lies in differential equations, differential geometry, dynamical systems, mathematical physics and topology and includes the computational aspects of these research areas – are encouraged to apply. We are especially interested in applicants with expertise in geometric or harmonic analysis, inverse problems, or numerical analysis. Applications should include a curriculum vita with publication list, a statement of future research plans, and at least three letters of recommendation. The AMS Standard Cover Sheet should be completed online at **http://www.mathjobs.org.** Applicants are encouraged to submit all their materials electronically at http:www.mathjobs.org. Review of applications will begin December 1, 2004. For more information about the department please visit **http://www.math.uab.edu.** UAB is an AA/EO employer.

UNIVERSITY OF ALABAMA, TUSCALOOSA – DEPARTMENT OF MATHEMATICS - The Department of Mathematics invites applications for one tenure-track position at the level of assistant professor in the area of Mathematics Education beginning in Fall 2005. Candidates must posses a doctorate in mathematics or a doctorate in mathematics education with a master's degree in mathematics (or the equivalent) by August 31, 2005. A commitment to excellence in teaching is required. Preference will be given to candidates who appear likely to establish a funded K-12 outreach program or whose research interests are concerned with curriculum reform at the K-12 or college level. It is expected that the successful applicant will, in addition to research, teach undergraduate and graduate courses and act as a liaison with the College of Education. The position is dependent upon funding and the salary will be commensurate with the successful candidate's experience. All candidates should provide a curriculum vita, publication list and research/outreach plans, and arrange for three letters of recommendation to be sent to **Dr. Robert Moore, Chair of the Search Committee, Department of Mathematics, University of Alabama, Tuscaloosa, AL 35487-0350.** Applications will be reviewed immediately and continue until the position is filled. The University of Alabama is an Affirmative Action/Equal Opportunity Employer. For more information about the department and university, visit our website: http://math.ua.edu/.

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UNIVERSITY OF ALBERTA - DEPARTMENT OF MATHEMATICAL AND STATISTICAL SCIENCES – NSERC Tenure-Track University Faculty Award Posittion - The Department of Mathematical and Statistical Sciences is actively seeking to nominate a candidate for an NSERC University Faculty Award in the Fall, 2005 competition. The University Faculty Award was created by NSERC to encourage Canadian universities to appoint outstanding women and aboriginal researchers to tenure-track positions in science and engineering. Further information on the program can be found be found at the following web page: http://www.nserc.ca/professors_e.asp?nav=profnav&lbi=c7 The nominee will have an outstanding record of research and publication. We are particularly interested in a field related to an area of existing or emerging strength in the Department, although other areas will be considered too. Some areas of research excellence, recently highlighted by the University of Alberta Faculty of Science, include: algebra, functional analysis, fluid dynamics, statistics, mathematical biology and scientific computing. The candidate will also have a strong commitment to and aptitude for teaching undergraduate students, and will be expected to supervise graduate theses. This tenure-track appointment is scheduled to begin on or near July 1, 2006. Applications should be sent to the Chair at the address below. Applications should include a curriculum vitae and research and teaching profiles, outlining experience and/or interests. Candidates should arrange for at least three confidential letters of reference to be sent to the Chair at the address below: **Anthony To-Ming Lau, Chair, Department of Mathematical and Statistical Sciences, University of Alberta, Edmonton, Alberta, Canada T6G 2G1.** The closing date for applications is March 1, 2005. Early applications are encouraged. The University of Alberta hires on the basis of merit. We are committed to the principle of equity in employment. We welcome diversity in the workplace and encourage applications from all qualified individuals, including aboriginal peoples, persons with disabilities, and members of visible minorities. According to NSERC regulations applicants must be Canadian citizens or permanent residents of Canada.

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 2005. 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 2005-2006 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, 2004 and continues as long as positions remain unfilled. Applications received before October 1, 2004 will receive the fullest consideration; applications received after January 2, 2005 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/coversheet), 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 OF CALIFORNIA, BERKELEY – DEPARTMENT OF MATHEMATICS - Tenure Track Position – Pending budget approval, we invite applications for one or more positions effective July 1, 2005 at the tenure track (Assistant 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 must 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, Department of Mathematics, University of California, Berkeley, Berkeley, CA 94720**. 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/overview_employment_academic.html). All applicants are required to use the AMS standardized application form and to indicate their subject area using the AMS subject classification numbers. The form is the Academic Employment in Mathematics, Application Cover Sheet. It is available courtesy of the American Mathematical Society. Applications must be postmarked by January 1, 2005. Applications postmarked after the deadline will not be considered. The University of California is an Equal Opportunity Employer.

UNIVERSITY OF CALIFORNIA, BERKELEY – EMSW21 Postdoctoral Positions - We invite applications for two special (non-tenure-track) positions, effective July 1, 2005. Applicants should have a recent Ph.D., or the equivalent, in pure or applied mathematics. Preference will be given to applicants in the areas of representation theory, geometry and combinatorics. These positions are supported in part by the NSF through its EMSW21 Research Training Group program. NSF requires that applicants be citizens, nationals or permanent residents of the United States, its territories and possessions. The term of these appointments is three years, with a reduced teaching load of one course per semester. These appointments carry an additional stipend of $10,000 in each of the first two years for summer research, and up to $2,500 per year for travel and other research-related expenses. Applicants should send a resume, reprints, preprints and/or dissertation abstract, and ask three people to send letters of evaluation to **The Vice Chair for Faculty Affairs, Department of Mathematics, University of California, 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 at: http://apo.chance.berkeley.edu/evalltr.html. 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, available from the American Mathematical Society. Applications must be postmarked by January 1, 2005. Applications postmarked after the deadline will not be considered. The University of California is an Equal Opportunity, Affirmative Action.

UNIVERSITY OF CALIFORNIA, DAVIS – DEPARTMENT OF MATHEMATICS - The Department of Mathematics at the University of California, Davis is soliciting applications for three to four tenure-track/tenured positions and a few Visiting Research Assistant Professor positions starting July 1, 2005. For the tenure-track/tenured positions, appointments may be made at the Assistant or Associate Professor level. Applications are encouraged in all areas of mathematics. We are particularly interested in Analysis/Partial Differential Equations, Applied Mathematics/Scientific Computation, and Mathematical Physics/Geometry. Other Davis Faculty research areas are: Mathematical Biology; Geometry and Topology; Numerical Analysis, and Discrete Mathematics. Minimum qualifications for the position include a Ph.D. degree, or its equivalent, in the Mathematical Sciences and great promise in research and teaching. Duties include mathematical research, undergraduate and graduate teaching (three to four quarter-courses per year), and departmental and university service. Candidates for an Associate Professorship must have demonstrated outstanding attainment in research and teaching. For the Visiting Research Assistant Professor (VRAP) positions, the Department is interested in applicants with excellent research potential in any of the research areas listed above and excellent teaching skills. VRAP applicants are required to have completed their Ph.D. by the time of their appointment, but no earlier than July 1, 2001. The positions are renewable for up to a total of three years, assuming satisfactory performance in research and teaching. Additional information on the Department may be found at http://math.ucdavis.edu/. Applications will be accepted until the positions are filled. To receive full consideration, the application should be received by December 1, 2004. To apply, submit an application and supporting documentation electronically through http://www.mathjobs.org/. No paper submission is needed unless a candidate is unable to submit electronically. Reference letters should be submitted online through Math Jobs. If they are unable to do so, they may send their letters to: the **Chair of Search Committee, Department of Mathematics, University of California, One Shields Avenue, Davis, CA 95616-8633**. The University of California, Davis, is an affirmative action/equal opportunity employer.

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UNIVERSITY OF CALIFORNIA, SANTA BARBARA – DEPARTMENT OF MATHEMATICS AND DEPARTMENT OF PHYSICS – Faculty Position – The Departments of Mathematics and Physics invite applications for a Tenure-Track Assistant Professor position, joint between the two departments. The starting date is July 1, 2005. **The position is in the general area of Geometry and Theoretical Physics.** Qualifications are research and teaching excellence and Ph.D. in Mathematics, Physics or relevant field. To apply, submit resume, statement of research, statement of teaching philosophy and the American Mathematical Society cover sheet (available online at http://www.ams.org), and arrange for four letters of reference to be sent (at least one of which is directed towards teaching if possible). Materials should either be submitted electronically via http://www.mathjobs.org or sent directly to: **Search Committee, Mathematics-Physics position, Department of Mathematics, University of California, Santa Barbara, CA 93106-3080 USA.** The selection process will begin December 20, 2004 and continue until the position is filled. The department is especially interested in candidates who can contribute to the diversity and excellence of the academic community through research, teaching and service. UCSB is an affirmative action/equal opportunity employer.

UNIVERSITY OF CALIFORNIA, SANTA BARBARA – DEPARTMENT OF MATHEMATICS AND DEPARTMENT OF STATISTICS AND APPLIED PROBABILITY – invite applications for an open level position, joint between the two departments with the starting date of July 1, 2005. **The position is in a general area of Stochastic Analysis.** Candidates with interest in Mathematical Finance are strongly encouraged to apply. Qualifications: research and teaching excellence and PhD in Statistics, Mathematics, or relevant field. To apply submit resume, statement of research and teaching objectives, the American Mathematical Society Cover Sheet (available online at http://www.ams.org), and have four letters of reference sent (at least one of which is directed towards teaching). Materials should either be submitted electronically via http://www.mathjobs.org or sent to: **Search Committee, Department of Statistics and Applied Probability, University of California, Santa Barbara, CA 93106-3110** USA. Selection process begins November 20, 2004 and continues until the position is filled. Candidates who can contribute to the diversity and excellence of the academic community through research, teaching and service are particularly encouraged to apply. An EE/AO employer. Additional information at http://www.pstat.ucsb.edu or http://www.math.ucsb.edu.

UNIVERSITY OF FLORIDA, DEPARTMENT OF MATHEMATICS - Applications are invited for a tenure-track position at the assistant professor level in the following two areas: Functional Analysis, Partial Differential Equations. Appointment begins in Fall 2005. Salary will be competitive. Applicants must show strong research promise and excel in teaching as well. Applicants must forward curriculum vitae and list of publications to: **Chair of Tenure-track Search Committee Department of Mathematics University of Florida Gainesville, FL 32611-8105** by January 3, 2005. Applicants must arrange for three letters of recommendation to be sent directly to the above address. The department welcomes applications from women and minority candidates. The University of Florida is an EEO/AA institution. For more information about the position or institution: http://www.math.ufl.edu.

UNIVERSITY OF FLORIDA, DEPARTMENT OF MATHEMATICS - Applications are invited for the John G. Thompson Research Assistant Professorship for an appointment beginning in Fall 2005 with salary of $53,000 for the academic year 2005-06. Authorization of this position is subject to state funding. It is expected that the position will be renewed for two additional years. There is a summer research supplement of $5,000 following each academic year's appointment, and a reduced teaching load of one course per semester during each academic year. Eligibility: Mathematics Ph.Ds who have received degrees in the year 2002 or later. Outstanding candidates in all areas of mathematics are encouraged to apply. Candidates must send vita and list of publications to: **Chair of Post-doc Search Committee, Department of Mathematics, University of Florida, Gainesville, FL 32611-8105** by January 30, 2005, and arrange for three letters of recommendation to be sent directly to the above address. The University of Florida is an Equal Opportunity Institution. For more information about the position or institution: http://www.math.ufl.edu

UNIVERSITY OF ILLINOIS AT CHICAGO - DEPARTMENT OF MATHEMATICS, STATISTICS AND COMPUTER SCIENCE - The Department has active research programs in centrally important areas of pure mathematics, computational and applied mathematics, combinatorics and computer science, statistics, and mathematics education. See http://www.math.uic.edu for more information. Applications are invited for the following positions, effective August 16, 2005. **Tenure track positions**. Candidates in all areas of interest to the Department will be considered. The position is at the Assistant Professor level. Applicants must have a Ph.D. or equivalent degree in mathematics, computer science, statistics, mathematics education or related field, an outstanding research record, and evidence of strong teaching ability. The salary is negotiable. **Research Assistant Professorships**. These are non-tenure track positions, normally renewable annually to a maximum of three years. These positions carry a teaching responsibility of one course per semester, and the expectation that the incumbent play a significant role in the research life of the Department. The salary for AY 2004-2005 for these positions is $48,000, the salary for AY 2005-2006 may be higher. Applicants must have a Ph.D. or equivalent degree in mathematics, computer science, statistics, mathematics education or related field, and evidence of outstanding research potential. Send vita and at least three (3) letters of recommendation, clearly indicating the position being applied for, to: **Appointments Committee; Dept. of Mathematics, Statistics, and Computer Science; University of Illinois at Chicago; 851 S. Morgan (m/c 249); Chicago, IL 60607**. No e-mail applications will be accepted. To ensure full consideration, materials must be received by January 1, 2005. However, we will continue considering candidates until all positions have been filled. Minorities, persons with disabilities, and women are particularly encouraged to apply. UIC is an AA/EOE.

UNIVERSITY OF LOUISVILLE – DEPARTMENT OF MATHEMATICS - The Department of Mathematics at the University of Louisville invites applications for several tenure-track positions at the Assistant Professor level beginning Fall 2005. Minimum qualifications for these positions include a Ph.D. degree, or its equivalent, in the Mathematical Sciences and promise of excellence in research and teaching. Preference will be given to applicants who strengthen the department's new Ph.D. program in applied and industrial mathematics and who complement the existing strengths in the department. Interested applicants should submit (1) the AMS Standard Coversheet; (2) curriculum vitae; (3) summary of research interest; (4) statement of teaching qualifications; and (5) at least four letters of recommendation, including letters which discuss at length research and teaching qualifications. To receive full consideration, material should be received by December 15, 2004. Applications should be sent to: **Search Committee, Department of Mathematics University of Louisville Louisville, KY 40292.** The Department of Mathematics is committed to building a culturally diverse faculty and strongly encourages women, African Americans, and other minorities to apply. AA/EOE

For *AWM EVENTS* at the *Joint Mathematics Meetings* - see PAGE 51

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UNIVERSITY OF MARYLAND, COLLEGE PARK - DEPARTMENT OF MATHEMATICS - Applications are invited for tenured and tenure-track positions in the Department of Mathematics. Preference will be given to candidates in (1) Applied Harmonic Analysis, (2) Geometry/Topology, and (3) Probability (with a significant PDE or statistics component), but candidates from all areas are encouraged to apply. Applications are also invited for a three-year VIGRE Postdoctoral Fellowship. Priority will be given to applications received by **December 17, 2004**. Appointments will commence in Fall 2005. The University of Maryland is an Equal Opportunity and Affirmative Action employer that strongly encourages applications from female and minority candidates. Applicants must provide a curriculum vitae, an AMS Standard Cover Sheet, and four letters of recommendation, three regular research and one regular teaching. Application material may be provided through the AMS application service mathjobs.org or sent directly to: **The Hiring Committee, Department of Mathematics, University of Maryland, College Park, Maryland 20742.**

UNIVERSITY OF MARYLAND, COLLEGE PARK - DEPARTMENT OF MATHEMATICS - Applications are invited for tenured and tenure-track positions in the Norbert Wiener Center for Harmonic Analysis and Applications in the Department of Mathematics. Applications are also invited for a three-year Postdoctoral Fellowship in the Norbert Wiener Center. Priority will be given to applications received by January 21, 2005. Appointments will commence in Fall 2005. The University of Maryland is an Equal Opportunity and Affirmative Action employer that strongly encourages applications from female and minority candidates. Applicants must provide a curriculum vitae, an AMS Standard Cover Sheet, and four letters of recommendation, three regular research and one regular teaching. Application material may be provided through the AMS application service mathjobs.org or sent directly to: **The Hiring Committee, Department of Mathematics, University of Maryland, College Park, Maryland 20742.**

UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL – DEPARTMENT OF MATHEMATICS - The UNC-CH Mathematics Department invites applications for a junior level tenure track position, specializing in mathematical cell biology, effective July 1, 2005. Applicants must have completed or expect to complete the Ph.D. or equivalent degree in mathematics or a closely related field by July 2005. In addition, applicants must have a strong research program and a commitment to excellence in teaching. This position will provide an opportunity and expectations for collaborations with UNC-CH Medical School and Biology Department faculty. Duties of this position will include teaching at the undergraduate and graduate levels and continued research. Applicants should send the (1) The AMS Standard Cover Sheet, (2) curriculum vita, (3) description of current research and a plan for future research, (4) a statement of teaching goals, and (5) four letters of recommendation. The AMS Standard Cover Sheet should be completed online at www.mathjobs.org . Applicants are encouraged to submit their entire application at this site. Applications can also be mailed to: Tenure Track Search, Department of Mathematics, University of North Carolina at Chapel Hill, CB #3250 Phillips Hall, Chapel Hill, NC 27599-3250. Review of applications will begin December 15, 2004. For further information on the Department or this position, please visit our website at http://www.math.unc.edu or contact Professor Christopher Jones at mathchair@unc.edu. UNC-CH is an Equal Opportunity Employer.

UNIVERSITY OF NOTRE DAME - DEPARTMENT OF MATHEMATICS - Regular Position in Numerical Analysis - The Department of Mathematics of the University of Notre Dame invites applications from an applied mathematician with a special interest in numerical analysis. The starting date for the position is August 22, 2005. 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: **William G. Dwyer, 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.science.nd.edu/math/

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, especially number theory, algebraic geometry, the Langlands program, and areas of algebra such as commutative algebra consonant with the research interests of the department. The starting date for the position is August 22, 2005. 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: **William G. Dwyer, 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.science.nd.edu/math/

UNIVERSITY OF NOTRE DAME - DEPARTMENT OF MATHEMATICS - Notre Dame Instructorship in Mathematics - The Department of Mathematics of the University of Notre Dame invites applications from recent doctorates for the position of Notre Dame Instructor in Mathematics. Candidates in any specialty compatible with the research interests of the department will be considered. The teaching load and salary will be competitive with those of distinguished instructorships at other AMS Group I universities. This position is for a term of three years beginning August 22, 2005, is non-renewable and non-tenure track. Applications, including a curriculum vitae, a letter of application, and a completed AMS standard cover sheet, should be sent to: **William G. Dwyer, 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.science.nd.edu/math/

Address Change? Position Change? Please let AWM know!

Please inform us of any changes, so we can keep our database up-to-date. Just fill out the changes using the **form on the BACK COVER** or drop us an **email**. THANKS. EMAIL: awm@math.umd.edu

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UNIVERSITY OF OKLAHOMA – DEPARTMENT OF MATHEMATICS - Applications are invited for one or more full-time, tenure-track position(s) in mathematics beginning 16 August 2005. The position(s) is initially budgeted at the assistant professor level, but an appointment at the associate professor level may be possible for an exceptional candidate with qualifications and experience appropriate to that rank. Normal duties consist of teaching two courses per semester, conducting research, and rendering service to the Department, University, and profession at a level appropriate to the faculty member's experience. The position(s) requires an earned doctorate and research interests that are compatible with those of the existing faculty; preference will be given to applicants with potential or demonstrated excellence in research and prior successful undergraduate teaching experience. Salary and benefits are competitive. For full consideration, applicants should send a completed AMS cover sheet, curriculum vitae, a description of current and planned research, and have three letters of recommendation (at least one of which must address the applicant's teaching experience and proficiency) sent to: **Search Committee, Department of Mathematics, The University of Oklahoma, 601 Elm, PHSC 423, Norman, OK 73019-0315**. Phone: 405-325-6711. FAX: 405-325-7484. Email: search@math.ou.edu. Screening of applications will begin on December 15, 2004 and will continue until the position(s) is filled. The University of Oklahoma is an Equal Opportunity/Affirmative Action Employer. Women and Minorities are Encouraged to Apply.

UNIVERSITY OF OREGON – DEPARTMENT OF MATHEMATICS - Three positions available: **1)** Assistant or Associate Professor in pure or applied mathematics, statistics or mathematics education. Tenure related. **2)** Assistant or Associate Professor in probability, statistics or related area. Tenure related. **3)** Paul Olum Visiting Assistant Professor, two-year postdoc. Non-tenurable. For descriptions, qualifications and application instructions, see: **http://www.uoregon.edu/~math/employment.html.** Application materials may NOT be submitted electronically. Closing January 5, 2005. Women and minorities are encouraged to apply. The University of Oregon is an EO/AA/ADA Institution committed to diversity.

UNIVERSITY OF PENNSYLVANIA – DEPARTMENT OF MATHEMATICS – Junior Positions in Mathematics - Several positions (including a possible tenure-track position) will be available beginning July 1, 2005. Candidates should have strong research credentials and be recognized as potentially successful teachers of undergraduate and graduate students. Send resume and three letters of reference to the **Personnel Committee, Department of Mathematics, University of Pennsylvania, Philadelphia, PA 19104-6395.** These will be reviewed beginning January 1, 2005. Candidates are encouraged to apply early. The University of Pennsylvania is an equal opportunity, affirmative action employer.

UNIVERSITY OF PENNSYLVANIA – DEPARTMENT OF MATHEMATICS – Tenure position in Mathematics - We anticipate that commencing July 1, 2005, there may be one or more tenure positions available in the broad areas of Mathematical Analysis and/or Applied Mathematics. These positions are for candidates with outstanding, internationally recognized research achievements who are successful teachers of undergraduate and graduate students. 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 SOUTHERN CALIFORNIA – DEPARTMENT OF MATHEMATICS - The University of Southern California, Department of Mathematics expects to have several non tenure-track positions available for Fall, 2005: **Busemann Assistant Professorship in Geometry.** Applicants should have a Ph.D or equivalent no earlier than 2002 and show exceptional promise in research. Teaching load: 2 courses for one semester and 1 course for the other. Duration: 3 year appointment. **Non-Tenure-Track Assistant Professorships.** Applicants should have a Ph.D. or equivalent and show exceptional promise in teaching and research. Teaching load: 2 courses per semester. Duration: 1-3 year appointment. To apply, please submit the following materials in a single package: letter of application (including your e-mail address, fax number, and position applied for), the AMS Cover Sheet, and curriculum vitae. Candidates should also arrange for three letters of recommendation to be sent. Mail all materials to: Mathematics Search Committee, University of Southern California, Department of Mathematics, KAP 108, Los Angeles, CA 90089-2532. Review of applications will begin November 15, 2004. Additional information about the USC Department of Mathematics can be found on the Web at http://math.usc.edu. USC is an Equal Opportunity/Affirmative Action Employer.

UNIVERSITY OF TENNESSEE – DEPARTMENT OF MATHEMATICS – The Department of Mathematics seeks to fill one tenure-track assistant professorship with an Outreach Mathematician (OM). Candidates must have either a doctorate in mathematics or a doctoral degree in another discipline plus a master's degree in Mathematics. Also required is a clear commitment to outreach activities. Some postdoctoral experience is preferred. Employment begins August 1, 2005. In addition to exhibiting excellence in teaching and maintaining an active program of scholarly activities, the successful candidate will concentrate on making connections with high schools and/or community colleges. The expectations about research activities include engagement in scholarly publications related to outreach efforts; writing successful grant proposals to fund teacher enhancement workshops and/or related events which improve the teaching and learning of mathematics; being involved in mathematics education reform across the state or the Appalachian region; providing leadership to the department for the pre-service and in-service training of K-12 mathematics teachers and for ongoing outreach efforts; and serving on committees for mathematics education student in the master's and doctoral programs. Interested applicants should arrange to have a vita, three reference letters, a statement of accomplishments, qualifications, plans for outreach activities, and evidence of quality teaching sent to **Professor Robert J. Daverman, OM Search, Mathematics Department, University of Tennessee, Knoxville, TN 37996-1300**. Electronic applications are not acceptable. Use of the recent AMS application form is encouraged. Review of applications will begin December 1 and will continue until the position is filled. The University of Tennessee is an EEO/AA/Title VI/Title IX/Section 504/ADA/ADEA institution in the provision of its education and employment programs and services.

UNIVERSITY OF TEXAS AT AUSTIN - DEPARTMENT OF MATHEMATICS – Expected openings for Fall 2005 include: (a) Instructorships, some that have R.H. Bing Faculty Fellowships attached to them and others that are VIGRE Instructorships, and (b) three positions at the tenure-track/tenure level. **(a) Instructorships** at The University of Texas at Austin are postdoctoral appointments, renewable for two additional years. It is assumed that applicants for Instructorships will have completed all Ph.D. requirements by August 31, 2005. Other factors being equal, preference will be given to those whose doctorates were conferred in 2004 or 2005. Candidates should show superior research ability and have a strong commitment to teaching. Consideration will be given only to persons whose research interests have some overlap with those of the permanent faculty. Duties consist of teaching undergraduate or graduate courses and conducting independent research. The projected salary is $40,000 for the nine-month academic year. Each **R.H. Bing Fellow** holds an Instructorship in the Mathematics Department, with a teaching load of two courses in one semester and one course in the other. The combined Instructorship-Fellowship stipend for nine-months is $47,000, which is supplemented by a travel allowance of $1,000. Pending satisfactory performance of teaching duties, the Fellowship can be renewed for two additional years. Applicants must [**continued →**]

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[← **continued**] show outstanding promise in research. Bing Fellowship applicants will automatically be considered for other departmental openings at the postdoctoral level, so a separate application for such a position is unnecessary. VIGRE Instructorships are partially funded by an NSF VIGRE Grant awarded to the department (in partnership with the Texas Institute for Computational and Applied Mathematics). The combined Instructorship-VIGRE Postdoctoral Fellowship carries a nine-month stipend of $45,000, with an annual allocation of $2500 to cover equipment, supplies, and travel. The position also includes summer support in the amount of $6500 for the first two summers of the appointment. VIGRE appointments are contingent upon continued funding. The teaching load for VIGRE Instructors is one course per semester. Only citizens, nationals and permanent residents of the U.S. are eligible for VIGRE Instructor appointments. Furthermore, a VIGRE Instructor must have received the Ph.D. within eighteen months of the date the appointment becomes effective. All eligible applicants for postdoctoral positions in either the Mathematics Department (ICES) will automatically be considered for a VIGRE Instructorship. Those wishing to apply for Instructor positions are asked to send a vita and a brief research summary to the **Department of Mathematics, University of Texas at Austin, Austin, TX 78712 c/o Instructor Committee.** Transmission of the preceding items via the internet (URL: https://www.ma.utexas.edu/jobs/application) is encouraged. (b) An applicant for a tenure-track or tenured position must present a record of exceptional achievement in her or his research area and must demonstrate a proficiency at teaching. In addition to the duties indicated above for Instructors, such an appointment will typically entail the supervision of M.A or Ph.D. students. The salary will be commensurate with the level at which the position is filled and the qualifications of the person who fills it. Those wishing to apply for tenure-track/tenured positions are asked to send a vita and a brief research summary to **Department of Mathematics, University of Texas at Austin, Austin, TX 78712 c/o Recruiting Committee.** Transmission of the preceding items via the internet (URL: https://www.ma.utexas.edu/jobs/application/TenureTrack) is encouraged. All applications must be supported by three or more letters of recommendation, at least one of which speaks to the applicant's teaching credentials. The screening of applications will begin on December 1, 2004. The University of Texas at Austin is an equal opportunity employer.

WAYNE STATE UNIVERSITY - DEPARTMENT OF MATHEMATICS - Applications are invited for one tenure-track position at the rank of Assistant/Associate/Full Professor in any area of specialization. Persons active in research in the fields of Algebra, Computational Mathematics or Numerical analysis are especially encouraged to apply. Applications from female and minority candidates are particularly encouraged. There is also the possibility of visiting positions for 2005-2006 in any area of mathematics. Ph.D. in mathematics and a strong interest in research and teaching are 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. Applications received by December 1, 2004 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. **Posting number 031039** at **https://jobs.wayne.edu.**

WESTERN ILLINOIS UNIVERSITY – DEPARTMENT OF MATHEMATICS - Two Tenure-Track positions, Assistant Professor, August 2005 - One position in **Applied Mathematics**; one position in **Statistics** with a preference for Applied Statistics. Applicants with interest in an ongoing revision of our master's degree program are encouraged to apply. Teaching with appropriate integration of computing technology, research, and service expected. Qualifications: PhD; Demonstrated, or potential for, excellence in teaching; a record of, or potential for, research; a record of, or commitment to, service. Screening begins December 15, 2004; continues until positions are filled. Preliminary interviews at the Atlanta Joint Meeting. Send letter, vita, teaching philosophy, research description, three reference letters, and transcripts (photocopies) to: **Iraj Kalantari, Chair, Mathematics Department, Western Illinois University, Macomb, IL 61455-1390.** URL: http://www.wiu.edu/mathematics/. Western Illinois University is an Affirmative Action/Equal Opportunity employer and has a strong institutional commitment to diversity. In that spirit, we are particularly interested in receiving applications from a broad spectrum of people, including minorities, women, and persons with disabilities. WIU has a non-discrimination policy that includes sex, race, color, sexual orientation, religion, age, marital status, national origin, disability, or veteran status.

WESTERN MICHIGAN STATE UNIVERSITY – DEPARTMENT OF MATHEMATICS – The Department of Mathematics hopes to fill three positions for 2004-2005, pending budgetary approval. One position is for a Professor and Chair, another is for a tenure-track Assistant Professor specializing in combinatorics/graph theory, and the third is for a tenure-track Assistant Professor with expertise in Collegiate Mathematics Education. Details regarding these positions and the application process are available on our website **(http://www.wmich.edu/math).**

WILLIAMS COLLEGE - DEPARTMENT OF MATHEMATICS AND STATISTICS - The Williams College Department of Mathematics and Statistics invites applications for one tenure track position in mathematics, beginning fall 2005, 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 15 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.

WILLIAMS COLLEGE - DEPARTMENT OF MATHEMATICS AND STATISTICS - The Williams College Department of Mathematics and Statistics invites applications for one tenure track position in statistics, beginning fall 2005, 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 15 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.

Association for Women in Mathematics

2004/2005 MEMBERSHIP FORM

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**

LAST NAME _____ FIRST NAME _____ M.I. _____

ADDRESS _____

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

Email: **Home Phone:** ❑ **do not** publish home number **Work Phone:** ❑ **do not** publish work number

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

PROFESSIONAL INFORMATION: If **student,** GRADUATE **or** UNDERGRADUATE **(circle one)**
Position: **If not employed, leave position & institution blank**
Institution/Company:
City, State, Zip:

DEGREES EARNED:

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

ND_04

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.**

For NEW Individual members: JOIN at the reduced rate of $30.00 for the 03/04 membership year [valid thru 9/30/04]

REGULAR INDIVIDUAL MEMBERSHIP.....	$ 50	_____
2ND FAMILY MEMBERSHIP.....	$ 30	_____
(NO newsletter) Please indicate regular family member: _____		
CONTRIBUTING MEMBERSHIP.....	$100	_____
RETIRED or PART-TIME EMPLOYED MEMBERSHIP (circle one).....	$ 25	_____
STUDENT or UNEMPLOYED MEMBERSHIP (circle one).....	$ 15	_____
ALL FOREIGN MEMBERSHIPS (INCLUDING CANADA & MEXICO)....**FOR ADDITIONAL POSTAGE ADD**	$ 8	_____
All payments must be in U.S. Funds using cash, U.S. Postal orders, or checks drawn on U.S. Banks.		
BENEFACTOR [$2,500] or FRIEND [$1,000] (circle one).....	$	_____
❑ I am enclosing a DONATION to the **"AWM GENERAL FUND"**.....	$	_____
❑ I am enclosing a DONATION to the **"AWM ALICE T. SCHAFER PRIZE"**.....	$	_____
❑ I am also enclosing a DONATION to the **"AWM ANNIVERSARY ENDOWMENT FUND"**.....	$	_____

Indicate if you wish for your **contribution(s)/donation(s)** to remain ANONYMOUS ⇨ ❑
Dues in excess of $15 and all cash contributions/donations are deductible from federal taxable income.

INSTITUTIONAL DUES SCHEDULE

❑ CATEGORY **1** (includes 10 student memberships; 1 free ad; 25% off additional Newsletter & online ads∗)..	$250	_____
❑ CATEGORY **2A** (includes 3 student memberships; 1 free ad; 10% off additional Newsletter & online ads∗)....	$125	_____
❑ CATEGORY **2B** (includes 6 student memberships; 10% off Newsletter & online ads∗).....	$125	_____

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

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

AWM Events

AWM would like to invite you to our events to be held in conjunction with the Joint Mathematics Meetings
Hyatt Regency Atlanta and Atlanta Marriott Marquis, Atlanta, Georgia, January 5-8, 2005

Preliminary Schedule of AWM Events as of November 1, 2004

Wednesday, January 5th

Consulate Room, Marriott

3:20 p.m.- 4:20 p.m. **Panel Discussion:** ***"Achieving Diversity in Graduate Programs, Part 1: The Challenge to Retain Women"***
cosponsored by the National Association of Mathematicians; **Organizers: Suzanne Lenhart,** University of Tennessee and Oak Ridge National Laboratory, **Sylvia T. Bozeman,** Spelman College. **Panelists: to be announced**
Before the panel discussion, AWM will recognize the **15th Annual Alice T. Schafer Prize honorees** [winner, runner(s)-up & honorable mention(s). [Part II of this panel presentation will be on 1/8/05 at 9:00 a.m. under NAM's listing of events and will be held in the Trinidad/Madrid Rooms,Marriott. Saturday's organizers: are **Nathaniel Dean**, Texas Southern Univ. and **Rhonda J. Hughes**, Bryn Mawr College]

4:20 p.m. - 4:50 p.m. **Business Meeting** All AWM members are invited to attend — **Consulate Room, Marriott**

4:50 p.m. - 5:30 p.m. **Focus: Future** Moderator: **Helen Moore,** American Institute of Mathematics — **Consulate Room, Marriott**
This is an opportunity to share your ideas with the AWM Long Range Planning committee

6:00 p.m. - 8:15 p.m. **Noether Dinner** — **Avanzare Restaurant, Hyatt**
AWM will have a get-together with the Noether Lecturer for a casual dinner. If you would like to join us a sign-up sheet will be at the Exhibit Table or at the AWM Panel on Wednesday

9:30 p.m. **Reception** (entire math community invited; music, refreshments & cash bar available) — **Regency 7, Hyatt**

Thursday, January 6th

9:00 a.m. - 9:50 a.m. **26th Annual Emmy Noether Lecture:** ***"From Limit Cycles to Strange Attractors"*** — **Centennial Ballrooms 1-3, Hyatt**
presented by **Lai-Sang Young** Courant Institute of Mathematical Sciences, New York University

4:20 p.m. - 7:00 p.m. **Joint Prize Session: Presentation** to the winners of the — **Centennial Ballrooms 1-3, Hyatt**
15th Annual Louise Hay Award for Contributions to Mathematics Education and the
15th Annual Alice T. Schafer Prize for Excellence in Mathematics by an Undergraduate Woman
These award presentations are held in conjunction with the **Joint Prize Session**. A cash bar reception will immediately follow.

Friday, January 7th

6:30 p.m. - 9:30 p.m. **AWM Workshop Dinner** [for Workshop presenters, mentors, panelists & organizers] — **Spring Room, Hyatt**

Saturday, January 8th

8:20 a.m. - 4:00 p.m. **AWM WORKSHOP:** presentations by **Women Graduate Students& Recent Ph.D.'s** — **Regency 7, Hyatt**
The entire math community is invited to attend all Workshop presentations.
The AWM Workshop is supported by the National Security Agency and the Office of Naval Research
Organizers: Dawn A. Lott, Delaware State Univ., Claudia Polini, Univ. of Notre Dame and Judy Walker, Univ. of Nebraska, Lincoln

8:30 a.m. - 10:30 a.m. **AWM sponsored research talks by recent women Ph.D.'s I**

8:30 a.m. – 8:50 a.m.	*Unit Rank and the Rank of the Class Group of a Global Function Field*	**Allison M. Pacelli**, Williams College
9:00 a.m. – 9:20 a.m.	*Strichartz estimates for solutions of Schrödinger equations with external fields*	**Virginia Naibo**, University of Kansas
9:30 a.m. – 9:50 a.m.	*A Theoretical Simulation Of Hematopoietic Stem Cells During Oxygen Fluctuations: Prediction Of Bone Marrow Responses During Blood Loss*	**Eliana S Antoniou**, William Paterson University
10:00 a.m. – 10:20 a.m.	*Linear Algebra and Image Restoration*	**Lisa Perrone**, Tufts University

10:30 a.m. - 11:45 a.m. **AWM sponsored Poster Session featuring Recent Ph.D.'s and Graduate Students(light refreshments will be available)**
[NOTE: Recent Ph.D.s are flagged with (%)]

Monotone factors and stochastic domination	**Karen T. Ball**, Indiana University, Bloomington (%)
Classifying the Type of Groupoid C-algebras*	**Lisa Orloff Clark**, Dartmouth College (%)
Decay of the probability of ruin under uncertain investments	**Corina D. Constantinescu**, Oregon State University
Residual intersections in Cohen-Macaulay rings	**Christine K. Cumming**, Purdue University
Finding Rational Cubic Spirals	**Donna Ann Dietz**, Mansfield University (%)
Success in University-Required Mathematics Courses: An Investigation of Students with Learning Disabilities	**Brooke Evans**, Morgan State University (%)
The Geometry of the Loewner Equation	**Joan R. Lind**, University of Washington
Extensions of Noncyclic p-Algebras with an application to Indecomposable Division Algebras	**Kelly L. McKinnie**, University of Texas at Austin
Almost-Additive Thermodynamic Formalism	**Anna Mummert**, Pennsylvania State University
A decoupling technique and necessary conditions for the neutral problem of Bolza	**Norma L Ortiz,** Louisiana State University
Stability in Some Nonlinear Difference Equations	**Mihaela Predescu**, Bentley College (%)
Filtration Shrinkage and Compensators	**A. Deniz Sezer**, Cornell University
Realizability of Graphs	**Maria T. Sloughter**, Cornell University
Stanley's partition function and its relation to$p(n)	**Holly M Swisher**, University of Wisconson, Madison
A mathematical model for signaling in early stages of tumor-induced angiogenesis	**Nicoleta E Tarfulea**, University of Minnesota

11:45 a.m. - 12:45 p.m. **AWM Workshop Luncheon** [for Workshop presenters, mentors, panelists & organizers]

1:00 p.m. - 2:25 p.m. **Panel Discussion**: *"Shaping a Career in Mathematics"* Moderator: **Dawn A. Lott**, Delaware State University; Panelists: TBA

2:30 p.m. - 4:30 p.m. **AWM sponsored research talks by recent women Ph.D.'s II**

2:30 p.m. – 2:50 p.m.	Hypercyclic *and Supercyclic Operators in the Weak Topology of Banach Spaces*	**Rebecca L Sanders**, Marquette University
3:00 p.m. – 3:20 p.m.	*The Cayley-Bacharach Theorem and Coding Theory*	**Leah H. Gold,** Texas A&M University
3:30 p.m. – 3:50 p.m.	*Distinguishing chambers of the moment polytope*	**Tara S. Holm,** University of California, Berkeley
4:00 p.m. – 4:20 p.m.	*Lifting maps from a vector space of Jacobi cusp forms to a subspace of certain elliptic modular forms*	**Kathrin Bringmann,** University of Wisconsin, Madison

For more details on the above events, please see the following websites: **www.ams/org/amsmtgs** or **www.awm-math.org.**
At the meeting, please stop by the **AWM Table** in the **Exhibit area** for an **AWM Events Program** or refer to the **Joint Meetings Program.**

Volume 34, Number 6, November–December 2004

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