ASSOCIATION FOR WOMEN IN MATHEMATICS

Newsletter

VOLUME 41, NO. 6 • NOVEMBER–DECEMBER 2011

The purpose of the Association for Women in Mathematics is

- to encourage women and girls to study and to have active careers in the mathematical sciences, and
- to promote equal opportunity and the equal treatment of women and girls in the mathematical sciences.

IN THIS ISSUE

PRESIDENT'S REPORT

The Association for Women in Mathematics has been very busy in this year of our 40th anniversary. In the two months since I wrote my last report for the newsletter, AWM has been to MathFest 2011 in Lexington, KY, and to the campus of Brown University, Providence, RI, for the research conference "40 Years and Counting: AWM's Celebration of Women in Mathematics."

Congratulations to Dawn Lott, Delaware State University, who was awarded the honor of delivering the Etta Z. Falconer Lecture at MathFest this year. She reported on her research in mathematical modeling of rupture tendency of cerebral aneurysm to a widely appreciative and packed audience (despite the early hour). Special to MathFest this year was an AWM Student Chapters poster session, organized by Maia Averett, Mills College. The posters highlighted the diverse activities of some of the AWM Student Chapters. A panel discussion, "Moving up the Career Ladder in Academia," culminated AWM activities at MathFest. Thanks to Georgia Benkart, University of Wisconsin-Madison; Rebecca Garcia, Sam Houston State University; Jacqueline Jensen-Vallin, Sam Houston State University; and Maeve McCarthy, Murray State University, for organizing the panel.

"40 Years and Counting," held at Brown University, September 17–18, was a great success. The combination of high-level research talks and the warm atmosphere convinced me, and others who were present, that AWM should facilitate more such conferences and workshops in the future. Georgia Benkart, University of Wisconsin-Madison; Kristin Lauter, Microsoft Research; and I organized this event. We would like to acknowledge the invaluable assistance of ICERM staff, especially Lauren Barrows for the many hours she devoted to communication, registration, and preparation as well as handling all local logistics. On-site assistance was provided by Lauren, Brown University students, ICERM IT staff Mat Borton and Shaun Wallace, and Brown tech support. Over 300 women and men from 148 different institutions across the U.S. and 16 women from 10 foreign countries participated in the conference, which featured four plenary lectures and eighteen special sessions. The plenary speakers were Andrea Bertozzi, UCLA; Laura DeMarco, University of Illinois at Chicago; Barbara Keyfitz, The Ohio State University; and Hee Oh, Brown University. See http://icerm.brown.edu/awm-anniversary-2011 for a complete list of speakers at the special sessions and their abstracts. The sponsors were: AMS, Brown University, DOE, ICERM, MAA, Microsoft Research, NSF, SIAM and Pearson Education. The National Science Foundation funding played an essential role in the success of the meeting,

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ASSOCIATION FOR WOMEN IN MATHEMATICS

AWM was founded in 1971 at the Joint Meetings in Atlantic City.

The *Newsletter* is published bi-monthly. Articles, letters to the editor, and announcements are welcome.

Opinions expressed in AWM *Newsletter* articles are those of the authors and do not necessarily reflect opinions of the editors or policies of the Association for Women in Mathematics. Authors sign consent to publish forms.

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President's Report *continued from page 1*

enabling 65 early-career (Ph.D. after 2006, pre-tenure, or graduate student) women to participate and also provided approximately 35 senior speakers and session organizers with partial funding. The Department of Energy supported 33 graduate students or early career women who presented posters at one of three poster sessions. Both AMS and SIAM had exhibits—and AMS placed a post-event announcement and photos on its web page [see the photo spread on pp. 16–18 for photos from the AMS and others]. We were delighted to welcome NSF leaders Sastry Pantula, Division Director of DMS, and Deborah Lockhart, Deputy Division Director of Information and Intelligent Systems, CISE. All of the sponsors had representatives at the conference.

On the Friday preceding the 40th anniversary conference, the AWM Executive Committee and Long Range Planning Committee convened a retreat. Fifteen of us discussed both strategic and functional issues. Breakout session groups reviewed AWM programs and activities, charges of committees, prizes and awards, collaborations with other professional societies and issues related to membership and fund-raising. Ideas and recommendations emerged from each of these sessions that will be ultimately be considered by the Executive Committee. I will keep you posted as these ideas crystallize into action.

Jill Pipher

Jill Pipher
Providence, RI
September 26, 2011

AWM Election

This year, we are electing a President-Elect, a Treasurer, and four Members-at-Large of the Executive Committee. The Member-at-Large positions are contested, so we encourage you to vote. Statements, biographical data, and photos provided by the candidates follow. Those elected will take office on February 1, 2012.

You will receive an email inviting you to vote on November 18, 2011. At that time the electronic ballot link (www.awm-math.org/ballot.htm) will be activated. You will be asked to provide your membership number when you vote; this number will be included in the email that you receive. Also, a ballot is included on page 9 of this issue, for those who prefer to vote the old-fashioned way. A validating signature is required on the envelope if you vote via paper ballot. Institutional memberships do not carry voting privileges. Electronic ballots must be cast by **December 15, 2011**, which is also the due date for paper ballots.

PRESIDENT-ELECT

Ruth Charney, Brandeis University

Ruth Charney

I have been involved with the AWM since the 1980s and have watched the organization mature over the years. It is an honor to be nominated as President.

One of the most exciting changes I have seen in the mathematics community in recent years is the increased focus on young people. I believe that this development was inspired, in part, by programs aimed at increasing participation of women. By promoting innovative ideas to improve the environment and make the field more welcoming, AWM has the potential not only to help women, but also to influence the mathematics community as a whole.

The connections I have developed with other women mathematicians in the course of my career have immeasurably enriched my experience as a mathematician. Through workshops, travel grants, and special events, AWM offers opportunities for women to promote their research, to develop collaborations, and to connect with other women in the field. Much of the work of AWM is supported through external grants. As president, I will focus on increasing our grant support for new and existing programs. I will also work with other national organizations to ensure that increasing participation of women in the mathematical sciences remains a priority.

This past year has seen a celebration of AWM's fortieth anniversary. The anniversary conference at Brown this September was inspiring. While much remains to be done, there is also much to celebrate. I look forward to working with the staff and governance of AWM to build on these accomplishments.

Biographical information: Ruth Charney is a Professor of Mathematics at Brandeis University. She received her Ph.D. from Princeton University in 1977 and held postdoctoral positions at Berkeley and Yale. She moved to Ohio State University in 1984 where she remained until 2003 when she moved to her current position at Brandeis. She recently completed a term as chair of her department followed by a sabbatical leave at the ETH in Zürich. She has also held visiting positions at the Institute for Advanced Study in Princeton, the Mathematical Institute in Oxford, the IHES in Paris, and the Université de Borgogne in Dijon.

Her research spans several areas of mathematics, including K-theory, algebraic topology, and her current area of interest, geometric group theory. She publishes regularly in major journals and has given over 150 invited talks on her work, including two plenary lectures at AMS meetings and an MAA Distinguished Lecture. She was awarded an NSF postdoctoral fellowship in 1979 and has had continuous NSF support since that time.

She recently completed a term as Vice President of the American Mathematical Society and a member of the AMS Executive Committee. She currently

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Membership Dues
Membership runs from Oct. 1 to Sept. 30
Individual: $65 **Family (no newsletter):** $30
Contributing: $150
New member, affiliate and reciprocal members, retired, part-time: $30
Student, unemployed: $20
Outreach: $10
Foreign memberships: $10 addt'l. for postage
Dues in excess of $85 and all contributions are deductible from federal taxable income when itemizing.

Institutional Membership Levels
Category 1: $325
Category 2: $325
Category 3: $200
Category 4: $175
See www.awm-math.org for details on free ads, free student memberships, and ad discounts.

Sponsorship Levels
α **Circle:** $5000+
β **Circle:** $2500–$4999
Other levels available.
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 $65/year ($75 foreign). Back orders are $10/issue plus S&H ($5 minimum).

Payment—Payment is by check (drawn on a bank with a US branch), US money order, or international postal order. Visa and MasterCard are also accepted.

Newsletter Ads—AWM will accept ads 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 Managing Director, 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 $116 for a basic four-line ad. Additional lines are $14 each. See the AWM website for *Newsletter* display ad rates.

Newsletter Deadlines
Editorial: 24th of January, March, May, July, September, November
Ads: Feb. 1 for March–April, April 1 for May–June, June 1 for July–Aug., Aug. 1 for Sept.–Oct., Oct. 1 for Nov.–Dec., Dec. 1 for Jan.–Feb.

Addresses
Send all queries and all *Newsletter* material except ads and material for media and book review columns to Anne Leggett, leggett@member.ams.org. Send all book review material to Marge Bayer, bayer@math.ku.edu. Send all media column material to Sarah Greenwald, greenwaldsj@appstate.edu and Alice Silverberg, asilverb@math.uci.edu. Send everything else, including ads and address changes, to AWM, fax: 703-359-7562, e-mail: awm@awm-math.org.

serves on the Board of Trustees of the Mathematical Sciences Research Institute. She frequently participates in conferences and mentoring activities aimed at young mathematicians. These include organizing a two-week Program for Women at IAS, a Connections for Women workshop at MSRI, and several AWM workshops for graduate and postdoctoral women at the Joint Mathematics Meetings.

TREASURER

Ellen Kirkman, Wake Forest University

Ellen Kirkman

I am honored to be nominated for the position of AWM Treasurer, and I look forward to working with the many talented women involved in the AWM. I became interested in mathematics in high school, where many of the top mathematics students were women. There also were a number of talented female students in my college and graduate school classes. Since I received my Ph.D. in mathematics in 1975 the number of women receiving Ph.D.'s in mathematics has tripled. I began my career as the only woman in my department, but now I have three young female colleagues. My research area has benefitted from the contributions of a number of very talented women (starting with Emmy Noether), yet there are not many women at the research conferences I attend. The number of women in mathematics positions at the top universities is still small, and much remains to be done to expand the contributions of women to our profession. For forty years the AWM has been working to support women in mathematics through its many valuable programs, and I will work to see that is financially able to continue its important role.

Biographical information: Ellen Kirkman is Professor of Mathematics at Wake Forest University, where she has been a faculty member since 1975; she is the Program Director of the department's Master's degree program. She has spent sabbaticals at the University of Leeds in England, UCSD, and MSRI. She became interested in mathematics in a high school honors program that used the "new math" curriculum; she received her B.A. at the College of Wooster, Wooster, Ohio in 1970 and her Ph.D. in mathematics and M.A. in statistics from Michigan State University in 1975. Her professional activities include serving on the AMS Nominations Committee 2009–11, as an MAA Governor 2006–8, on the Joint Data Committee of AMS-ASA-MAA-IMS-SIAM (2000–2007 and 2009–present), directing the CBMS 2010 survey of undergraduate mathematical sciences programs, and involvement in several EDGE programs. She has received service awards from Wake Forest University and the Southeastern Section of the MAA. She is an associate editor of *Communications in Algebra,* and her current research interests focus on the invariant theory of noncommutative algebras.

ASSOCIATION FOR WOMEN IN MATHEMATICS

AWM ONLINE

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hgaff@odu.edu

Online Ads Info: Classified and job link ads may be placed at the AWM website.

Website: http://www.awm-math.org

AWM DEADLINES

AWM-SIAM Kovalevsky Lecture: November 1, 2011

SIAM Workshop: November 1, 2011

Ruth I. Michler Memorial Prize: November 1, 2011

Essay Contest: January 31, 2012

NSF-AWM Mentoring Travel Grants: February 1, 2012

Sonia Kovalevsky High School and Middle School Mathematics Days: February 4, 2012

NSF-AWM Travel Grants: February 1 and May 1, 2012

Louise Hay Award: April 30, 2012

M. Gweneth Humphreys Award: April 30, 2012

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MEMBER-AT-LARGE

Annalisa Crannell, Franklin & Marshall

Annalisa Crannell

There is a part of me that feels a bit tetchy at the idea of serving an entity like the AWM. Why should an organization like this still have to exist? I feel the same when I go to meetings and am asked to speak about women's issues in mathematics. Why can't I just speak about mathematics? My mother, who was a physicist at Goddard Space Flight Center, NASA, used to give presentations called, "Will our daughters be giving talks on women in physics?" Evidently, the answer is "yes."

And of course this is exactly why I continue to give such talks and to serve the AWM. The incredible obstacles that my mother and her generation faced so boldly are still there, but they are less severe because of their efforts. I owe huge debts of gratitude to the many women and men who came before me who helped smooth the way for mathematicians of either gender, for mathematicians of any race. Serving the AWM is a small amount of interest on that massive debt.

If I'm elected as a Member at Large on the AWM Executive Committee, I'll vigorously promote the excellent programs (travel grants, essay contests, SK days, mentor networks, workshops, newsletters) that encourage and support women in mathematics. I'll stump; I'll cheer; I'll do my share of committee paper work. Maybe, just maybe, our granddaughters won't have to do the same.

Biographical Information: Annalisa Crannell is a professor of mathematics at Franklin & Marshall. She has served on numerous committees of the AMS and MAA, including the AMS Nominating Committee, the AMS Committee on the Profession, and the MAA Board of Governors. Her mathematical research on topological dynamics includes a half-dozen papers co-authored with undergraduate students, and she has recently turned her attention to projective geometry applied to perspective art. Her book (co-authored with Marc Frantz), *Viewpoints: Mathematical Perspective and Fractal Geometry in Art,* was recently released by Princeton University Press.

Concha Gomez, Holy Names University

Concha Gomez

I am honored to have been nominated for the position of Member-At-Large on the AWM Executive Committee. As a student, and as an educator, I have been increasingly active in efforts to improve mathematics education for all learners, and in particular for students who have been historically excluded from our ranks. I believe very strongly in the need for organizations like the AWM to positively influence the direction of education for the next generation of scientists and

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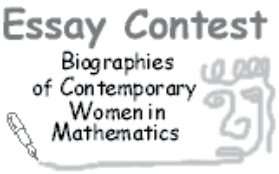

To increase awareness of women's ongoing contributions to the mathematical sciences, the Association for Women in Mathematics holds an essay contest for biographies of contemporary women mathematicians and statisticians in academic, industrial, and government careers. AWM is pleased to announce that the 2012 contest is sponsored by Math for America, www.mathforamerica.org.

The essays will be based primarily on an interview with a woman currently working in a mathematical career. The AWM Essay Contest is open to students in the following categories: grades 6–8, grades 9–12, and undergraduate. At least one winning entry will be chosen from each category. Winners will receive a prize, and their essays will be published online at the AWM website. Additionally, a grand prize winner will have his or her entry published in the AWM *Newsletter.* For more information, contact Dr. Heather Lewis (the contest organizer) at hlweis5@naz.edu or see the contest web page: www.awm-math.org/biographies/contest.html. The deadline for electronic receipt of entries is **January 31, 2012**. (To volunteer as an interview subject, contact Heather Lewis at the email address given.)

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scientific leadership. I welcome the challenge to represent the broad diversity of students and researchers on the executive board.

Biographical Information: Concha Gomez is currently Assistant Professor of Mathematics at Holy Names University in Oakland, CA. She earned her Ph.D. in mathematics from the University of California at Berkeley in 2000 under the direction of Leo Harrington. Before graduate studies, she had transferred to Berkeley from a California community college to complete her undergraduate degree in mathematics and became involved in efforts to increase the number of minority science, engineering, and mathematics students at Berkeley by tutoring and mentoring minority students in local public schools for the Mathematics, Engineering, and Science Achievement (MESA) program. As a graduate student in the 1990s she was a founding member of the Noetherian Ring, a group for women mathematics graduate students at Berkeley, and she served on the Mathematics Opportunity Committee, a departmental committee that identified promising women and minority applicants for the Ph.D. program.

Before coming to Holy Names, Concha was a Program Director for Retention and Equity at the Center for Science and Mathematics Education at San Francisco State University, the Director of the Wisconsin Emerging Scholars program at the University of Wisconsin at Madison, and an Assistant Professor of Mathematics at Middlebury College. While at Middlebury, Concha was a project NExT Fellow, and at Wisconsin she served as a Diversity Scholar for the Center for the Integration of Research, Teaching, and Learning. Concha's current research interests are in undergraduate mathematics education, specifically in the teaching of calculus in multicultural settings.

Tara Holm, Cornell University

Tara Holm

The AWM plays an essential role in mentoring women and girls in mathematics, and in advocacy for mathematics. It would be an honor and privilege to serve the mathematical community as a Member-at-Large on the Executive Committee of the AWM. The Association has been a tremendous source of support for me personally, through mentoring programs and travel grants. I look forward to promoting the ongoing programs and helping identify new ways to advance our goals.

I am committed to encouraging and supporting women at all stages in their education and careers. I am particularly interested in graduate education and in the critical transitions that occur on the route between graduate school and tenure. At each transition, proportionally more women than men leave the pipeline. With the current stagnant job market, I am also eager to address the challenges faced by recent Ph.D.'s.

Biographical information: Tara Holm is an Associate Professor of Mathematics at Cornell University. She was an undergraduate at Dartmouth College and earned her Ph.D. in 2002 from MIT under the direction of Victor Guillemin. She was an NSF Postdoctoral Fellow at UC Berkeley and then joined the faculty of the University of Connecticut before moving to Cornell in 2006. She participated in the MAA's Project NExT in 2005–06.

Tara's research focuses on questions that originate in symplectic geometry, but whose solutions often involve methods from and have applications to algebraic geometry, algebraic topology and combinatorics. It has been supported by grants from the NSF, the AWM, and the Simons Foundation. Tara mentors graduate students and postdocs, coorganizes the Cornell Topology Festival, and is a Faculty Fellow at Cornell's Carl Becker House. She has directed Cornell's Summer Mathematics Institute, a program aimed at increasing the number of women and students of underrepresented groups continuing to graduate school. She is a member of the AMS Council and an Associate Editor of the *American Mathematical Monthly.*

Kristin Lauter, Microsoft Research

Since graduate school, my research and career has benefitted from the support of AWM through mentoring and travel grants and the AWM Workshop at the JMM. I have been inspired by the work of AWM over the last four decades and all that has been accomplished to support the participation and success of girls and women in mathematics. I am honored to be nominated for the Executive Committee to serve and to help continue to build the organization.

My vision is to help create community and collaboration networks for female researchers in mathematics at all stages of their research careers. I believe this is the best way to increase the representation of women on the mathematics faculties at Research I universities, which in turn will help

to increase the number of women trained for research careers in mathematics. I would also like to help increase awareness in the mathematics community of opportunities for rewarding research careers in mathematics in industry.

Kristen Lauter

In 2008, I co-founded WIN (Women in Numbers) to build and promote a network of female researchers in number theory. Running the first WIN conference at BIRS, we formed working groups to address open research questions. The topics were chosen by several senior leaders in each group, and two to four graduate students or junior faculty were assigned to each topic. The Fields Institute published the volume of research and survey articles which came out of the conference, and collaborations arising from those projects continue. I hope that a similar model will work in many other areas of mathematics where women are underrepresented at the highest tier of research.

I have served in several capacities within AWM so far: current member of the Long-Range Planning Committee, co-organizer of the AWM 40th anniversary conference at ICERM, co-organizer of the AWM Workshop at the SIAM meeting in 2008, and AWM Workshop panelist in 2002. I have also co-organized a conference for women at the IMA and a panel at the Grace Hopper Annual Celebration of Women in Computing.

Biographical Information: Kristin Lauter is a Principal Researcher and the head of the Cryptography Research Group at Microsoft Research in Redmond, Washington, and an Affiliate Professor at the University of Washington. Her research focuses on applications of number theory and algebraic geometry. Lauter received her B.A., M.S., and Ph.D. degrees in mathematics from the University of Chicago, in 1990, 1991, and 1996, respectively. Prior to joining Microsoft Research, she held positions as T.H. Hildebrandt Research Assistant Professor at the University of Michigan (1996–1999), a Visiting Scholar at Max-Planck-Institut für Mathematik in Bonn, Germany (1997), and a Visiting Researcher at the Institut de Mathématiques Luminy in France (1999). In 2008, Lauter, together with her coauthors, was awarded the Selfridge Prize in Computational Number Theory. She is co-founder of the WIN network, a research community for women in number theory.

Maura Mast, University of Massachusetts, Boston

I am honored to be nominated for Member-at-Large of the AWM Executive Committee. I have been a member of AWM since I was a graduate student and from early on have been a firm believer in its mission of encouraging women and girls in the mathematical sciences and advocating for equal opportunity. I also know that the work that AWM does continues to be vital: while great progress has been made in advancing opportunities for women in science and mathematics, inequities and injustices still exist.

Maura Mast

I served as Clerk for AWM from 2004 to 2010, a time of great growth and focus for organization. During my first year as Clerk, I participated in a comprehensive long-range strategic planning process; in subsequent years, I worked with the Executive Committee on issues ranging from advocating for childcare at the Joint Meetings and organizing the portfolio structure for AWM to assessing options for support for the day-to-day operations for the organization. It has been incredible to see AWM move from that early strategic plan to the point where a new strategic planning process is needed, and it is exciting to contemplate the prospects for future work. In addition to my history with AWM, I bring other experiences with strategic planning and implementation from my work in the administration at UMass Boston. And as a member of the Joint Committee for Women in Mathematics, I have had opportunities to participate in a larger discussion of issues for women in the mathematical sciences; most recently, we have highlighted pipeline issues for women at each stage of their careers, from undergraduate work through postdoc, tenure and promotion, in a panel discussion at the Joint Mathematics Meetings. Finally, my work with the Association for Women in Science on its NSF-funded ADVANCE grant to investigate and improve the process of granting awards and prizes for scholarly achievement has given me new insights into issues of implicit bias in the awards and recognition process.

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This is an important time for AWM. The organization is transitioning from a very successful celebration of 40 years and looking ahead to 50 years of advocacy for women in the mathematical sciences. As Member-at-Large, I look forward to bringing my experience with leadership and advocacy to AWM in support of its mission.

Biographical information: Maura Mast is Associate Vice Provost for Undergraduate Studies and Associate Professor of Mathematics at the University of Massachusetts Boston, where she has been since 1998. She has had visiting positions at Wellesley College and the University of Notre Dame and held an NSF Visiting Professorship for Women at Northeastern University. She received her undergraduate degree in mathematics and anthropology from the University of Notre Dame in 1986 and her Ph.D. from the University of North Carolina at Chapel Hill in 1992; she then took a position at the University of Northern Iowa, where she earned tenure and promotion. Her research area is in differential geometry, with a focus on geodesic behavior in nilpotent Lie groups; her most recent publication appeared in September 2011 in *The Journal of Lie Theory.* Maura's other interests and professional activities include work in the area of quantitative literacy. She served as Chair of the MAA's Special Interest Group on Quantitative Literacy for two years, and her work in quantitative literacy is currently supported by a National Science Foundation grant. With Ethan Bolker, she is writing a textbook for the quantitative literacy classroom entitled *Common Sense.* She served as Clerk and Executive Committee member of the AWM from 2004 to 2010 and is currently co-chair of the AMS-MAA-AWM-SIAM-IMS-ASA-NCTM Joint Committee for Women in Mathematics. She represented AWM on the NSF-funded AWARDS project sponsored by the Association for Women in Science, has served on an AWM workshop selection committee, and has been a mentor for participants in the AWM workshops at the Joint Mathematics Meetings. Maura is also a consultant for Project NExT and is a member of Project Kaleidoscope's Faculty for the 21st Century. She participated in AWM's "After Tenure: Women Mathematicians Taking a Leadership Role" conference in 2004 and recently participated in the American Council on Education's National Leadership Forum.

Liz McMahon, Lafayette College

Liz McMahon

I was honored to be asked to run for a position on the AWM Executive Committee. The membership of AWM doesn't need a reminder of how important organizations like these are in a world that still throws barriers across the paths of women of all races. AWM has worked to improve access to mathematics for girls and women, and I hope to help broaden that work. Both of my daughters are now math teachers, so this is something dear to my heart. I've been working with the AWM essay contest for several years, as a judge and as one who helps connect students to interviewees. I've enjoyed my contacts with young women across the nation and world in this context.

Of course, AWM can also be very valuable to women who already have earned degrees and are trying to craft a lasting career in mathematics. There is so much that still needs to be done to make sure that policies don't negatively impact women mathematicians, inadvertently or otherwise. Hiring is an area I'm particularly concerned about, as there is so much evidence that the hiring process, from letter writing to letter reading, is fraught with pitfalls for women, and most mathematicians (especially those on hiring committees) are unaware of them. AWM could provide a lasting service to women by helping to get this information out.

Biographical information: Liz McMahon was an undergraduate at Mount Holyoke College, got an M.S. from the University of Michigan and obtained her Ph.D. from UNC-Chapel Hill. She taught at Williams College and the University of Richmond before settling at Lafayette College, where she is now a full professor. Her dissertation was in non-commutative rings, but she now does research in combinatorics (polynomial invariants for greedoids) and some finite geometry (connected with the card game Set®). Much of her recent work has been with students through Lafayette's REU program and honors theses. She also recently coauthored a paper that appeared in the *American Mathematical Monthly.* She coauthored a book *Teaching the Isms* (with 5 colleagues in 5 different departments) on classroom strategies for teaching about the "isms": sexism, racism, classism, homophobia, etc.

Anna Wienhard, Princeton University

Anna Wienhard

It is my pleasure to be nominated to serve on the Executive Committee as a Member-at-Large of AWM. I was very fortunate that throughout my life I received a lot of encouragement and support in my pursuit to become and be a mathematician. Many of my mentors have been men, and I always felt that being a woman in mathematics is an advantage rather than a disadvantage. I was and still am often skeptical about activities which are specifically aimed at supporting women in mathematics. But through interactions I had with female graduate and undergraduate students and colleagues, I realized that for many women, in particular at early stages in their career, it is very important to interact with peers and role models who encourage them to pursue a career in mathematics or other sciences. The AWM plays an important role to launch and sustain a variety of activities at different levels to foster such interactions. I would be happy to contribute to the work of the AWM.

Biographical information: Anna Wienhard is an Assistant Professor in the Department of Mathematics at Princeton University. She completed her Ph.D. in 2004 at the University of Bonn and held postdoctoral positions in Switzerland, at the Institute for Advanced Study and at the University of Chicago before coming to Princeton in 2007. Here she served as Director of Graduate Studies from 2007–2011 and has coordinated the Training, Research and Motion network since 2009. In 2008 she initiated, together with Ingrid Daubechies, the SWIM program, a summer workshop for mathematically talented female high school students, and organized the program in 2009 and 2010.

Her research is focused on the study of deformation spaces of geometric structures and associated representation varieties. She is a principal investigator on several NSF grants, including an NSF-CAREER grant and a recent NSF award to support a research network on "Geometric Structures and Representation Varieties" (GEAR).

ASSOCIATION FOR WOMEN IN MATHEMATICS

AWM Ballot

You will receive an e-mail inviting you to vote electronically (or see www.awm-math.org/ballot.htm); those who prefer may mail this ballot or a copy thereof to AWM, 11240 Waples Mill Road, Suite 200, Fairfax, VA 22030, to be received by **December 15, 2011**. You must validate a paper ballot by signing your name on the envelope, or your votes will not be counted.

President-Elect (vote for one):

❑ Ruth Charney ❑ _____

Clerk (vote for one):

❑ Ellen Kirkman ❑ _____

Member-at-Large (vote for up to four):

❑ Annalisa Crannell ❑ _____
❑ Concha Gomez ❑ _____
❑ Tara Holm ❑ _____
❑ Kristin Lauter ❑ _____
❑ Maura Mast
❑ Liz McMahon
❑ Anna Wienhard

New AWM-KWMS Affiliate Membership Agreement

Georgia Benkart

In late April, I met with Professor Sun Young Jang, President of the Korean Women in Mathematical Sciences (KWMS), and Professor Kyewon Koh Park, the founder and first president of KWMS, at the Korea Institute for Advanced Study in Seoul to finalize terms of an affiliate membership agreement with AWM. In the works for over a year, the agreement was signed in late August by the current presidents of the two societies, Young Hee Kim and Jill Pipher.

What's this agreement all about? you might ask. Under its terms, individual members of KWMS who reside outside the U.S. qualify for affiliate membership in the AWM, which costs $30 per year and includes all the regular membership benefits of AWM. On the other side, individual members of AWM who reside outside the Republic of Korea qualify for affiliate membership in KWMS at a rate of $10 per year.

But what's it really about? The agreement institutionalizes an ongoing, mutually beneficial cooperation between the two organizations, which have collaborated in the past on such joint initiatives as the mentoring-networking event *Empowering Women Mathematicians for Excellence* at the joint meeting in Seoul of the Korean Mathematical Society and the American Mathematical Society in December 2009. AWM and KWMS also participated in the International Congress of Women Mathematicians (ICWM) organized by the European Women in Mathematics at Hyderabad, India, in August 2010. The next ICWM will take place in Seoul just prior to the International Congress of Mathematicians in August 2014, and already KWMS has raised a considerable sum of money to support the attendance of women mathematicians from developing nations at ICWM 2014. With the affiliate membership in place, the upcoming ICWM will provide an excellent opportunity to continue AWM's cooperation with Korean women in mathematics, and indeed with mathematicians from around the globe. So be sure to mark your calendars for this event!

Barbara Keyfitz

Keyfitz Named 2012 Noether Lecturer

AWM is pleased to announce that Barbara Keyfitz will deliver the Noether Lecture at the 2012 Joint Mathematics Meetings. Keyfitz, the Dr. Charles Saltzer Professor of Mathematics at the Ohio State University, was selected for this honor because of her fundamental contributions to the area of nonlinear partial differential equations.

Keyfitz received her B.S. in Mathematics from the University of Toronto and her M.S. and Ph.D. from New York University. Her dissertation was directed by Peter Lax. Keyfitz has held positions at Columbia, Princeton, Arizona State, and the University of Houston, and visiting positions at Berkeley, Brown, Duke, the Fields Institute, and the Institute for Mathematics and its Applications. From July 2004 to December 2008 she was the Director of the Fields Institute in Canada.

Her research is on nonlinear partial differential equations with emphasis on hyperbolic conservation laws and evolution equations that change type from hyperbolic to elliptic. She opened up a new research direction by developing a new technique to study multidimensional

conservation laws, defining free boundary problems to study transonic shocks.

Keyfitz has given numerous invited talks on the subject of conservation laws. She gave the Presidential Address at the 33rd Annual Meeting of the Statistical Society of Canada in 2005. In 2006 she was a joint plenary speaker at the SIAM Analysis of PDE conference and the SIAM Annual Meeting. She was an invited speaker at ICIAM 2007. In 2009, she gave a plenary lecture at the 14th General Meeting of European Women in Mathematics.

Keyfitz is a Fellow of the American Association for the Advancement of Science and of the Society for Industrial and Applied Mathematics. In 2005, she received the Krieger-Nelson Prize from the Canadian Mathematical Society.

Keyfitz is a Past President of the Association for Women in Mathematics and continues to be a very active member. She is currently chair of the AWM Long Range Planning Committee. She is a Vice-President of the American Mathematical Society and President of the International Council for Industrial and Applied Mathematics.

Her Noether Lecture is entitled "Conservation Laws—Not Exactly à la Noether" and will address recent developments in hyperbolic partial differential equations and the relationship of conservation law theory to Noether's famous theorem on conservation laws and symmetry.

The 2012 Joint Mathematics Meetings will be held January 4–7 in Boston, MA. The lecture honors Emmy Noether (1882–1935), one of the great mathematicians of her time. She worked and struggled for what she loved and believed in. Her life and work remain a tremendous inspiration. Recent Noether lecturers include Karen Vogtmann, Audrey Terras, Fan Chung Graham, Carolyn Gordon and Susan Montgomery.

NSF-AWM Travel Grants for Women

Mathematics Travel Grants. Enabling women mathematicians to attend conferences in their fields provides them a valuable opportunity to advance their research activities and their visibility in the research community. Having more women attend such meetings also increases the size of the pool from which speakers at subsequent meetings may be drawn and thus addresses the persistent problem of the absence of women speakers at some research conferences. The Mathematics Travel Grants provide full or partial support for travel and subsistence for a meeting or conference in the applicant's field of specialization.

Mathematics Education Travel Grants. There are a variety of reasons to encourage interaction between mathematicians and educational researchers. National reports recommend encouraging collaboration between mathematicians and researchers in education and related fields in order to improve the education of teachers and students. Communication between mathematicians and educational researchers is often poor and second-hand accounts of research in education can be misleading. Particularly relevant to the AWM is the fact that high-profile panels of mathematicians and educational researchers rarely include women mathematicians. The Mathematics Education Research Travel Grants provide full or partial support for travel and subsistence for

- mathematicians attending a research conference in mathematics education or related field.
- researchers in mathematics education or related field attending a mathematics conference.

Selection Procedure. All awards will be determined on a competitive basis by a selection panel consisting of distinguished mathematicians and mathematics education researchers appointed by the AWM. A maximum of $1500 for domestic travel and of $2000 for foreign travel will be funded. For foreign travel, US air carriers must be used (exceptions only per federal grants regulations; prior AWM approval required).

Eligibility and Applications. These travel funds are provided by the Division of Mathematical Sciences (DMS) of the National Science Foundation. The conference or the applicant's research must be in an area supported by DMS. Applicants must be women holding a doctorate (or equivalent) and with a work address in the USA (or home address, in the case of unemployed applicants). Please see the website (http://www.awm-math.org/travelgrants.html) for further details and do not hesitate to contact Jennifer Lewis at 703-934-0163, ext. 213 for guidance.

Deadlines. There are three award periods per year. Applications are due **February 1**, **May 1**, and **October 1**.

Moving up the Career Ladder in Academia

Jacqueline Jensen-Vallin, Slippery Rock University

On Saturday, August 6, at MathFest 2011, the MAA and AWM sponsored a panel entitled "Moving up the Career Ladder in Academia." The panelists—Dora Ahmadi of Morehead State University, Stephen Kennedy of Carleton College, and Maura Mast of the University of Massachusetts Boston—included two department chairs, an Associate Vice Provost for Undergraduate Studies, a former chair of the SIGMAA for Quantitative Literacy, a co-chair of the Joint Committee for Women in the Mathematical Sciences, a former co-editor of *Math Horizons,* a governor of the North Central Section of the MAA, and a chair of the Kentucky Section of the MAA.

Each panelist was given a chance to offer some words of wisdom to open the discussion. Highlights include the following:

- Saying yes to opportunities allows you to learn how things work around campus. How do you know which opportunities to participate in? Follow your heart. —*Dora Ahmadi*
- Do interesting and fun things. —*Steve Kennedy*
- A successful department chair fosters a culture where everyone can contribute, especially junior faculty. —*Steve Kennedy*
- Joining campus-wide committees allows you to get to know people in other departments. —*Maura Mast*

Panelists Dora Ahmadi, Steve Kennedy, and Maura Mast with moderator Jacqueline Jensen-Vallin

Jill Pipher (AWM President), Dawn Lott (Falconer Lecturer), and Farrah Jackson Chandler (Blackwell Lecturer)

- Sometimes the title determines how much power you have. —*Maura Mast*

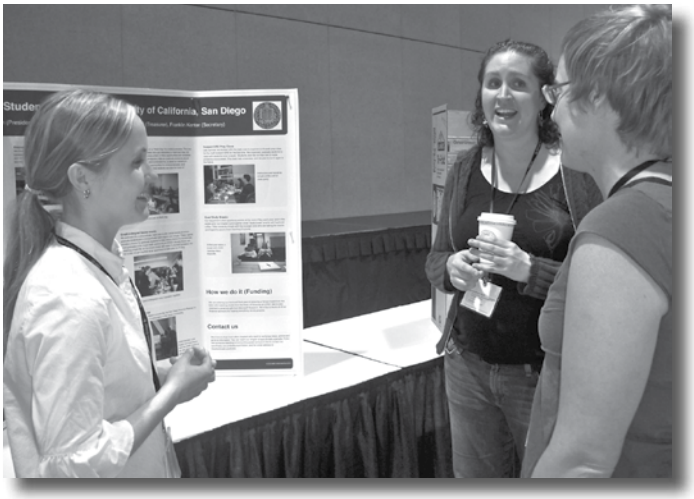
A lively discussion followed with audience members asking questions such as: "What if you are not in a department where each member feels that they can contribute and be heard?" In this case, the panelists suggested spending time speaking with the department chair and other faculty members individually to try to foster support of your ideas. These allies can then help you implement the changes you envision.

"Which committees should I try to get on in order to better understand how my campus works and to get to know people?" The panelists felt that *any* campus-wide committee can be helpful in this arena, but specifically suggested joining curriculum committees, governance committees, tenure/promotion committees, and strategic planning committees. It was emphasized that any committee that helps you understand how finances work at your university will give you power and the ability to effect change and implement new programs.

The panelists also addressed the issue of how to climb the academic ladder while balancing family and a personal life. Each said that the key is to have a supportive partner to help you. It was suggested that climbing the career ladder is easier to balance with older children, but each gave examples of ways that a partner can help, including: make you take breaks, vacations, or weekends off; be willing to chauffeur the children to their events; and just to be a sounding board for your frustrations and challenges.

All in all, the people in attendance for the panel discussion received some helpful suggestions about how to pursue administrative posts, how to be involved in their department and on their campus, and how to balance their career and family.

Rachel Bachman at her Clarkson University poster



Helen Parks (UCSD), Michelle Snider (government consultant), and Maia Averett (Mills College) at the UCSD poster

Maeve McCarthy (AWM Executive Director), Dubravka Bodiroga (Hood College), Maia Averett (Mills College), Helen Parks (UCSD), Betty Mayfield (1st VP of the MAA), Rachel Bachman (Clarkson University), Alexandra Ortan (Minnesota), Maila Brucal-Hallare (Kansas) and her daughter, Michelle Snider (government consultant), and Jill Pipher (AWM President)

MathFest 2011

AWM Student Chapter Poster Session

Maia Averett at her Mills College poster

MEDIA COLUMN

In addition to longer reviews for the media column, we invite you to watch for and submit short snippets of instances of women in mathematics in the media (WIMM Watch). Please submit to the Media Column Editors: Sarah J. Greenwald, Appalachian State University, greenwaldsj@appstate.edu *and Alice Silverberg, University of California, Irvine,* asilverb@math.uci.edu.

Viewing Life through Invisible Signs

Kristine Roinestad, Georgetown College, Georgetown, KY

Available "on demand" in April 2010, one month prior to its limited May theater release, the film *An Invisible Sign* (based on the novel *An Invisible Sign of My Own* by Aimee Bender) centers on 20-year-old Mona Gray, portrayed by Jessica Alba, and how she deals with life, including love, vulnerability, dysfunction and dying. Although mathematically talented, Mona is not portrayed in a delightfully positive manner; rather, she is peculiar and odd, and develops a paranoid focus on mathematics, which allows her to face reality.

Flashbacks infuse the film to fill the viewer in on the backstory. The movie opens on Mona's 10th birthday, with a scene depicting her mathematician father sharing with her a rather dark parable, one that stays with Mona until the end of the film. Shortly thereafter, her father is stricken by an undisclosed but disabling mental illness, and Mona begins to quit doing everything she loves with the exception of mathematics.

As her father's health declines and death hovers, Mona finds safety in numbers, shapes, signs, etc., and makes mathematics-based "deals" with God. She develops obsessive habits to preserve her sense of equilibrium because to her numbers explain everything. Mona knocks on wood whenever she's nervous or lonely, and is comforted by seeing the first few digits of π flying through the wood.

To the viewer, the storyline raises some of the same questions found in productions such as the play *Proof* and the film *A Beautiful Mind*—is there an inexplicable parallel between mathematical genius and mental illness, and can they be passed along from generation to generation?

Countless people hide from the realities of life by sheltering themselves from truths. In this film, however, many exhibit "numerical" oddities that mirror their respective frailties and are perceived as quirky and strange. Mona's predecessor as the town's elementary school mathematics teacher, who first taught her the Fibonacci sequence, always wears wax numbers around his neck to signify the degree of happiness he feels at the moment. (I especially enjoyed the reference to his "42" necklace. In the popular sci-fi book *The Hitchhikers Guide to the Galaxy,* the number 42 is the "Answer to the Ultimate Question of Life, the Universe, and Everything.")

At the age of 20, Mona begins teaching mathematics in the town's elementary school. Odd numerical behavior also reigns in her classroom. Mona hangs an axe on the wall as an example of the number seven, one of her students brings in his father's amputated arm to illustrate the number one and another student an intravenous tube to represent zero. Her students' artwork is dominated by numbers—volcanoes spewing numbers, a potted plant with numbered flowers, eyelashes of sixes, etc.

To Mona, numbers are a way to make sense of the circle of life and death. And in the end, it's love that brings her true understanding of her father's parable—the whole is greater than the sum of all the parts.

I'm Too Smart to Wear that T-Shirt

Martha McCaughey, Department of Sociology, Appalachian State University

The T-shirt has been an objet d'fashion since Marlon Brando made wearing the simple undershirt sexy in *Streetcar Named Desire.* More recently T-shirts went from plain to pronouncing cherished political beliefs, corporate logos, and silly sayings. While in Norway this summer, I saw a man wearing a T-shirt that said, "HORNY." (I decided to assume that he was one of the few there who don't speak fluent English.) On little babies, the shirts' sayings are always jokes among the parents, such as "Party at My Crib, 3 AM" and "Spitup Happens." Some in this category are offensive gender stereotypes. For instance one T-shirt currently marketed for boys reads "Lock Up Your Daughters!" If you know the Dubliners song from which this line is taken, you know that the implication is not simply that your son is so cute that he's going to break hearts but that, as the song goes, "Where girls are good lookin', we're lookin' for fun/ Oh, we'll chase'em and catch'em and love'em. So lock up.…" My son, the rapist. Eek.

So the girls' T-shirts "I'm Too Pretty to Do Homework So I Have My Brother Do it for Me" and "I'm Too Pretty to Do Math" are not without sexist precedent. J.C. Penney

pulled and apologized for their shirt after negative media attention and a change.org petition (see, for example, [1] and [2]). Forever 21's Fall 2011 collection included—but eventually excluded—a pink, white, and periwinkle "Allergic to Algebra" shirt for girls, apparently part of a general school-sucks line of shirts. Perhaps the retail giants got the idea off zazzle.com, a popular online destination for custom T-shirts and other products, which has had an "I'm Too Pretty to Do Math" T-shirt since early 2008. This design remains available on demand to be created and shipped almost immediately once ordered. Zazzle.com also features a "Math is Hard. Let's Go Shopping" T-shirt with a woman's face on it, a design that has been available since 2010. (And we thought it was bad when in 1992 Teen Talk Barbie said "math class is tough"—until the American Association of University Women, along with organizations including AWM and NCTM, pressured Mattel to change the doll's voice settings (see [3]).

Sure, some see the T-shirts as funny exercises of free speech rights. But guys, not girls, are the ones laughing all the way to the bank. For we still have way too few talented girls and women entering mathematics-based careers, and part of the reason is that ongoing cultural association between masculinity and mathematics.

Still, we don't want to seem like oversensitive, humorless cranks. So let's use our free speech and our humor to come up with some creative alternatives to the slogans that pit mathematics against successful femininity. I hope bloggers and others will encourage kids and their parents to take matters into their own hands and design their own T-shirts on zazzle.com or cafepress.com.

These websites already feature some designs quite suited to math-loving boys, such as the ones that say "π-rate," "π-mp," and "You Know What They Say About the Size of a Man's Calculator."

However, the math-oriented Christmas thong—which reads HO^3—left me wanting. "Cutie-π" is an existing option for girls and boys alike. "Math Chick" and "Math is for Girls" seem to be the only math-positive options specifically for little girls. I'm sure readers can come up with their own slogans and designs, but to kick off this culture-jamming campaign, here are a few suggestions of my own:

Calculus Queen

I'm Pretty and I Can Do Math

Beauty is a Variable. Self-Worth is a Constant.

Girls + Math = Beautiful

It's AlgeBRA not AlgeBRO!

Pretty Girls Make Great Mathematicians—
You're Staring at One Right Now

(and this one is for the grown-up women—hey, it's better than the "HO" thong):

Math is Hard. I Like Hard Things.

Notes

1. Krupnick, Ellie. "J.C. Penney Shirt Teaches Girls That Being Smart & Pretty Are Mutually Exclusive," in *Huffington Post,* September 1, 2011, http://www.huffingtonpost.com/2011/08/31/jc-penneys-girls-shirt_n_943349.html
2. Beilock, Sian. "Why Pretty Girls Can't Do Math," in *Choke, Psychology Today,* September 7, 2011, http://www.psychologytoday.com/blog/choke/201109/why-pretty-girls-can-t-do-math
3. Leggett, Anne. "Barbie." *AWM Newsletter,* November–December 1992, Volume 22, Number 6, p. 12. http://www.drivehq.com/folder/p8755087/1748761568.aspx

CALL FOR NOMINATIONS:

2012 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. Nomination materials for the Hay Award shall be submitted online. See the AWM website at www.awm-math.org for nomination instructions. Nominations must be received by **April 30, 2012** and will be kept active for three years. For more information, phone (703) 934-0163, email awm@awm-math.org or visit www.awm-math.org.

40 Years and Counting!

*Suzanne Lenhart (past president of AWM) and Anne Leggett (*AWM Newsletter *Editor)*

*Barbara Keyfitz (past AWM president) and Alice Silverberg (*AWM Newsletter *Media Column Co-editor)*

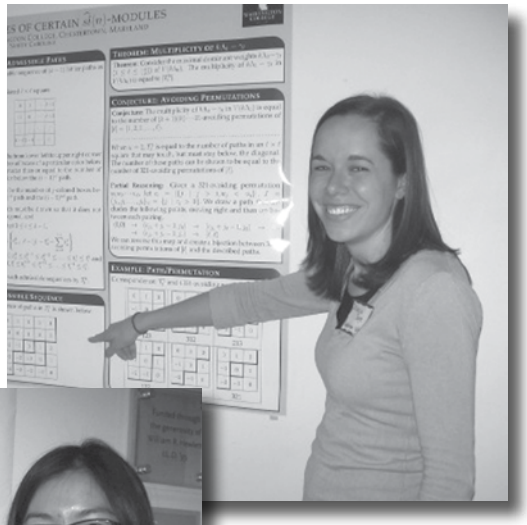
Conference organizers: Kristin Lauter (Microsoft Research), Jill Pipher (Brown University/ ICERM), and Georgia Benkart (Wisconsin Madison). Courtesy of the AMS

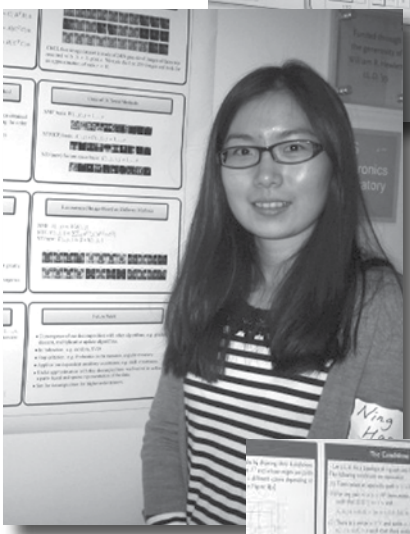
Paul Zorn (MAA President), Annie Selden (past winner of Hay Award), and John Selden (New Mexico State)

Ellen Maycock (AMS) and Laura DeMarco (Illinois at Chicago)

Shishi Luo (Duke) at her poster

Right: Rebecca Jayne (Washington College) at her poster. Courtesy of the AMS





Left: Ning Hao (Tufts) at her poster. Courtesy of the AMS

Smith Group: Patricia Cahn (Dartmouth), Laurel Boraz (Hobart William Smith), Megan Heenahan (Wesleyan), Samantha Oestriecher (Minnesota), Michelle Snider (government consultant), Erika King (Hobart Wiliam Smith), Joan Hutchinson (Macalester), and Ruth Haas (Smith). ©Jennifer Quinn

Right: Sarah Wright (College of the Holy Cross) at her poster. Courtesy of the AMS

Ann Trenk (Wellesley), Marge Bayer (Kansas), Pallavi Jayawant (Bates College), and Ruth Haas (Smith), with Joan Hutchinson (Macalester) in the background. ©Jennifer Quinn

Left: Laura Hall-Seelig (Merrimack College) explaining her poster. Courtesy of the AMS

More photos on page 18!

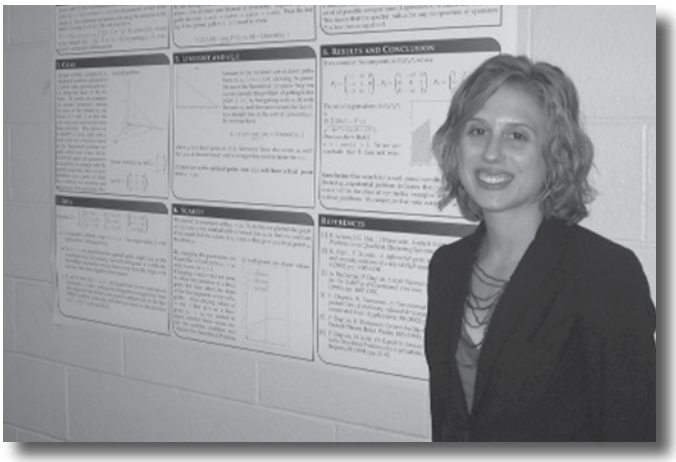
40 Years and Counting!

Le Yu (Drexel) explaining her poster to Melanie Matchett Wood (Wisconsin, Madison), Marge Bayer (Kansas), and Paul Zorn (partially hidden; MAA President). Courtesy of the AMS

Special Session in Graphs and Combinatorics: Left to right—Ann Trenk (Wellesley), Marge Bayer (Kansas), Pallavi Jayawant (Bates College), Susanna Fishel (Arizona State), Jennifer Quinn (Washington, Tacoma), Ruth Haas (Smith College), Joan P. Hutchinson (Macalester College), Jenny McNulty (Montana), Jo Ellis-Monaghan (St. Michael's College). Missing: Brigitte Servatius (WPI). ©Jennifer Quinn

Right: past and present presidents of AWM. Front row: Barbara Keyfitz (Ohio State), 2005-2007; Suzanne Lenhart (Tennessee/NIMBioS), 2001-2003; Bhama Srinivasan (Illinois at Chicago), 1981-1983; Linda Keen (CUNY Lehman), 1985-1987; Carolyn Gordon (Dartmouth), 2003-2005; Georgia Benkart (Wisconsin, Madison), 2009-2011; Jill Pipher (Brown/ICERM), 2011-2013; and Mary W. Gray (American University), 1971-1973. Back row: Carol Wood (Wesleyan), 1991-1993; Sylvia M. Wiegand (Nebraska), 1997-1999; Jean E. Taylor (NYU-Courant), 1999-2001; and Cathy Kessel (consultant), 2007-2009. ©Jennifer Quinn

Ellen Maycock (AMS), Margaret Robinson (Mount Holyoke), and Christine M. Berkesch (Duke) at one of the coffee breaks



Kasie Farlow (Virginia Tech) at her poster. Courtesy of the AMS

EDUCATION COLUMN

Potpourri on the Persistent Gender Gap in STEM Fields

Jackie Dewar, Loyola Marymount University, Los Angeles, CA

Using information gleaned from recent reports, studies and videotaped lectures, this column considers various aspects of the persistent gender gap in STEM fields. Specifically, readers' of this month's column will find:

- Statistical data from the U.S. Department of Commerce
- Lessons from Bryn Mawr College about attracting women into undergraduate STEM majors
- A provocative study on the influence of romantic goals on college-age students' interest in STEM studies
- How to address the rationale of "free choice" when offered as an objection to interventions intended to encourage women's involvement in STEM
- Information on a special series of talks at UCLA's Center for the Study of Women on stereotype threat
- Links to access each of the above.

In its 8-3-11 report, *Women in STEM: A Gender Gap to Innovation,*[1] the U.S. Department of Commerce states: "… women are vastly underrepresented in STEM jobs and among STEM degree holders despite making up nearly half of the U.S. workforce and half of the college-educated work-force. That leaves an untapped opportunity to expand STEM employment in the United States, even as there is wide agreement that the nation must do more to improve its competitiveness (p. 1)." More specifically, although women hold nearly 50 percent of all jobs in the U.S. economy, they hold less than 25 percent of STEM jobs. This gap has persisted, even while college-educated women have increased their share of the overall workforce in the first decade of the 21st century. STEM fields offer women a smaller gender wage gap: women with STEM jobs earn 33 percent more than comparable women in non-STEM jobs—a greater bonus than men who choose STEM jobs receive. Yet, the prospect of relatively greater financial compensation has not been enticing enough to attract more women into STEM jobs. While the report makes no attempt to explain the differences, it suggests there are many possible factors contributing to the discrepancy of women and men in STEM jobs, including: a lack of female role models, gender stereotyping, and less accommodating policies for workers with families in the

continued on page 20

[1] http://www.esa.doc.gov/Reports/women-stem-gender-gap-innovation (Accessed 8-18-11)

CALL FOR NOMINATIONS:

2012 M. Gweneth Humphreys Award

The Executive Committee of the Association for Women in Mathematics has established a prize in memory of M. Gweneth Humphreys to recognize outstanding mentorship activities. This prize will be awarded annually to a mathematics teacher (female or male) who has encouraged female undergraduate students to pursue mathematical careers and/or the study of mathematics at the graduate level. The recipient will receive a cash prize and honorary plaque and will be featured in an article in the AWM newsletter. The award is open to all regardless of nationality and citizenship. Nominees must be living at the time of their nomination.

The award is named for M. Gweneth Humphreys (1911–2006). Professor Humphreys graduated with honors in mathematics from the University of British Columbia in 1932, earning the prestigious Governor General's Gold Medal at graduation. After receiving her master's degree from Smith College in 1933, Humphreys earned her Ph.D. at age 23 from the University of Chicago in 1935. She taught mathematics to women for her entire career, first at Mount St. Scholastica College, then for several years at Sophie Newcomb College, and finally for over thirty years at Randolph Macon Woman's College. This award, funded by contributions from her former students and colleagues at Randolph-Macon Woman's College, recognizes her commitment to and her profound influence on undergraduate students of mathematics.

The nomination documents should include: a nomination cover sheet (available at www.awm-math.org/humphreysaward.html); a letter of nomination explaining why the nominee qualifies for the award; the nominee's vita; a list of female students mentored by the nominee during their undergraduate years, with a brief account of their post-baccalaureate mathematical careers and/or graduate study in the mathematical sciences; supporting letters from colleagues and/or students; at least one letter from a current or former student of the candidate must be included.

Nomination materials for the Humphreys Award shall be submitted online. See the AWM website at www.awm-math.org for nomination instructions. Nominations must be received by **April 30, 2012** and will be kept active for three years at the request of the nominator. For more information, phone (703) 934-0163, email awm@awm-math.org or visit www.awm-math.org/humphreysaward.html.

STEM fields. On the other hand, the report concludes with the claim that its findings provide "definitive evidence of a need to encourage and support women in STEM with a goal of gender parity."[2] (p. 8)

"Closing the Gap,"[3] an 8-13-11 article in the online newsletter *Inside Higher Ed,*[4] cites the Commerce Department's report and goes on to describe Bryn Mawr's success in attracting women into STEM majors. [For those interested in the history of women in mathematics, a brief digression follows: Bryn Mawr, an all-women's college, is the U.S. institution that offered a teaching position to Emmy Noether in 1933, when she and many other Jewish mathematicians and scientists fled Nazi Germany.] According to Jane McAuliffe, Bryn Mawr's president and author of "Closing the Gap," Bryn Mawr College ranks in the top 10 of all colleges and universities in terms of the percentage of female graduates pursuing doctorates in the STEM fields. Compared to college students nationwide, Bryn Mawr students are six times more likely to graduate with a degree in chemistry and nine times more likely to do so in math, and an amazing 18 times more in physics. While McAuliffe cites the college founders' role in its success (they offered women the opportunity to get an education equal to the finest available to men of the era), she notes that today's success in attracting women to STEM majors comes from more than just a history of access. Bryn Mawr's family-friendly policies facilitate work-life balance for faculty of both genders on the path to tenure and ultimately result in more women in the tenured faculty ranks in STEM fields. Currently, fully half of the tenured faculty in chemistry and mathematics are women. In addition, a variety of entry points into the sciences provides opportunities for students with a broad range of backgrounds to study science, and the science curriculum engages students actively in meaningful exercises. Meanwhile, STEM students at Bryn Mawr, many of whom arrived unsure of what they wanted to study, credit exposure to role models among the faculty, alumnae, and their fellow students and the positive effect of being in a classroom in which they aren't the only woman for their choice of and persistence in STEM.

Whether or not we should try to influence the choice women make between participating or avoiding careers in STEM elicits conflicting opinions to this day. McAuliffe herself acknowledges this when she writes about possible

[2] *Ibid.*

[3] http://www.insidehighered.com/views/2011/08/18/essay_on_women_in_science_and_technology_fields#Comments (Accessed 8-18-11)

[4] http://www.insidehighered.com (Accessed 8-18-11)

NSF-AWM Mentoring Travel Grants for Women

Mathematics Mentoring Grants. The objective of the NSF-AWM Mathematics 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. Each grant funds 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. The applicant's and mentor's research must be in a field which is supported by the Division of Mathematical Sciences of the National Science Foundation.

Mathematics Education Mentoring Grants. Women mathematicians who wish to collaborate with an educational researcher or to learn about educational research may use the mentoring grants to travel to collaborate with or be mentored by a mathematics education researcher. In order to be considered for one of the travel grants, a mathematics applicant must hold a doctorate in mathematics. A mentor should hold a doctorate in mathematics education or in a related field such as psychology or curriculum and instruction. The applicant's research must be in a field which is supported by the Division of Mathematical Sciences of the National Science Foundation.

Selection Procedure. AWM expects to award up to seven grants, in amounts up to $5,000 each. 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 1 to the selection committee or funds will be released for re-allocation. (Applicants for mentoring travel grants may in exceptional cases receive up to two such grants throughout their careers, possibly in successive years; each such grant would require a new proposal and would go through the usual competition.) For foreign travel, U.S. air carriers must be used (exceptions only per federal grant regulations; prior AWM approval required).

Eligibility and Applications. Applicants must be women holding a doctorate (or equivalent) and with a work address in the USA (or home address, in the case of unemployed applicants). Please see the website (http://www.awm-math.org/travelgrants.html) for further details and do not hesitate to contact Jennifer Lewis at 703-934-0163, ext. 213 for guidance.

Deadlines. There is one award period per year. Applications are due **February 1**.

responses to the gender gap: "Some may say, 'Well, so what? There are some jobs men like, and some jobs women like.' "[5] This perspective pops up in the back-and-forth responses posted online to another *Inside Higher Ed* article, "Romance versus STEM."[6] This article, appearing 8-17-11, reports on new studies that suggest when college-age students think about romance, women, but not men, become less interested in studying STEM fields. This research, "Effects of Everyday Romantic Goal Pursuit on Women's Attitudes toward Math and Science," will be published in the September issue of *Personality and Social Psychology Bulletin* and is available on-line as a pdf.[7] Irrespective of your view of the value of this research or its methodology, the *Inside Higher Ed* on-line repartee divides sharply, as expected, containing stereotypical viewpoints, several of which address the issue of "free choice." For example, the post by David, Professor of Chemistry, on August 17, 2011 at 3:15 p.m. EDT reads: "Societal 'forcing' of any societally defined group of individuals for any reason disrespects the choice of individual members of that group."[8]

This question (red herring?) of "free choice" is just one of many addressed by a series of talks in Spring 2011 sponsored by the UCLA Center for the Study of Women (CSW).[9] In examining why women continue to be underrepresented and underperforming in STEM fields, this series focused on the role of stereotype threat. Four speakers presented research demonstrating the emergence of stereotype threat in STEM domains, the mechanisms that account for this phenomenon, and the ways in which we can intervene to prevent the deleterious influence of stereotype threat. The talks by Joshua Aronson (NYU), Nilanjana Dasgupta (University of Massachusetts), Toni Schmader (University of British Columbia) and Steven Spencer (University of Waterloo) are all available on the CSW Playlist on UCLA's YouTube Channel.[10] I had the good fortune to be able to hear three of the four speakers in person. I found the talks so informative and well done that I arranged a series of gatherings of the women STEM faculty on my campus to view and discuss the videos, and I highly recommend that readers consider doing this on their campuses. For more about this series, including interviews with each speaker, see the Women and STEM 2011 issue of *CSW Update,* the CSW monthly web newsletter.[11]

I return now to the issue of "free choice" as a rationale not to invest in intervention programs or related research on the underrepresentation of women in STEM fields. Here is how the interviewer of Nilanjana Dasgupta worded the question in the Women and STEM 2011 issue: "What do you say to those, specifically with women in STEM, who say it's just a woman's choice to not be in the field and that it's not stereotypes or stigma, it's a choice?"[12] (p. 11) And here is Professor Dasgupta's response (taken from an interview by Ines Jurcevic published in Women and STEM 2011 issue of *CSW Update*):

> I think in our lay understanding of choices, we think of choice as being entirely free. That anything a person chooses, by definition, is something that is guided by that person's intrinsic motivation, by their talent, or any factor they choose. Either way it is their choice and that justifies any group differences we might observe. However, I don't think women's professional and academic decisions in STEM fields constitute a free choice in the way that non-psychologists think about choice. I think it's a constrained choice, at best. This is likely to be true for many other groups that are either underrepresented in a profession and about whom there are these doubts about ability. For majority groups in the same professions who are not burdened by negative stereotypes, the choice is less constrained and more free. If we can equate this and give everybody equal freedom to choose their intellectual and professional paths, then however we end up, we could live with that. There's a lot we can do to make it a freer choice for women and underrepresented minorities in STEM and that's the goal of my research (p. 11). [13]

[5] http://www.insidehighered.com/views/2011/08/18/essay_on_women_in_science_and_technology_fields#Comments (Accessed 8-18-11)

[6] http://www.insidehighered.com/news/2011/08/16/study_finds_that_exposure_to_romantic_ideas_discourages_college_women_from_studying_stem#Comments (Accessed 8-18-11)

[7] http://www.buffalo.edu/news/pdf/August11/ParkRomanticAttitudes.pdf (Accessed 8-18-11)

[8] http://www.insidehighered.com/news/2011/08/16/ study_finds_that_exposure_to_romantic_ideas_discourages_college_women_from_studying_stem#Comments (Accessed 8-18-11)

[9] http://www.csw.ucla.edu (Accessed 8-18-11)

[10] http://www.youtube.com/ucla#p/c/A929BBD1F30DC69A (Accessed 8-18-11)

[11] http://www.csw.ucla.edu/publications/newsletters (Accessed 8-18-11)

[12] *Ibid.*

[13] *Ibid.*

Scientific Workspace Flexibility Policies

Office of the Press Secretary, The White House, September 2011

On September 26, 2011, White House Council on Women and Girls Executive Director Tina Tchen, White House Office of Science and Technology Policy Director John P. Holdren, and National Science Foundation (NSF) Director Subra Suresh announced the "NSF Career-Life Balance Initiative," a 10-year plan to provide greater work-related flexibility to women and men in research careers. Among the best practices that NSF will expand Foundation-wide, are ones that will allow researchers to delay or suspend their grants for up to one year in order to care for a newborn or newly adopted child or fulfill other family obligations—maximizing current policy to facilitate scientists' reentry into their professions with minimal loss of momentum.

"Jump-starting girls' interest in science, technology, engineering and math—the so-called STEM subjects—and boosting the percentage of women employed in science and engineering is not just the right thing to do but is also the smart thing to do for America's future and the economy," said Tchen.

"Too many young women scientists and engineers get sidetracked or drop their promising careers because they find it too difficult to balance the needs of those careers and the needs of their families," said Suresh. "This new initiative aims to change that, so that the country can benefit from the full range and diversity of its talent."

Later that day, First Lady Michelle Obama spoke at a White House event about the importance of supporting and retaining women and girls in STEM careers.

"If we're going to out-innovate and out-educate the rest of the world, we've got to open doors for everyone," said Obama. "We need all hands on deck, and that means clearing hurdles for women and girls as they navigate careers in science, technology, engineering and math."

NSF—which is the leading source of Federal grants for many fields of basic research crucial to US technology development and job creation, including computer science, mathematics, and the social sciences—is also calling upon universities and research institutes to adopt similar policies for their employees and grantees.

Women today currently earn 41% of Ph.D.'s in STEM fields, but make up only 28% of tenure-track faculty in those fields. Reducing the dropout rate of women in STEM careers is especially important in the quest for gender equality because women in STEM jobs earn 33 percent more than those in non-STEM occupations and the wage gap between men and women in STEM jobs is smaller than in other fields.

NSF has launched targeted workplace flexibility efforts in the past, but the new initiative is the first to be applied Foundation-wide to help postdoctoral fellows and early-career faculty members more easily care for dependents while continuing their careers. The new initiative will offer a coherent and consistent set of family-friendly policies and practices to help eliminate some of the barriers to women's advancement and retention in STEM careers. It will:

- Allow postponement of grants for child birth/adoption: Grant recipients can defer their awards for up to one year to care for their newborn or newly adopted children.
- Allow grant suspension for parental leave: Grant recipients who wish to suspend their grants to take parental leave can extend those grants by a comparable duration at no cost.
- Provide supplements to cover research technicians: Principal investigators can apply for stipends to pay research technicians or equivalent staff to maintain labs while PIs are on family leave.
- Publicize the availability of family friendly opportunities: NSF will issue announcements and revise current program solicitations to expressly promote these opportunities to eligible awardees.
- Promote family friendliness for panel reviewers: STEM researchers who review the grant proposals of their peers will have greater opportunities to conduct virtual reviews rather than travel to a central location, increasing flexibility and reducing dependent-care needs.
- Support research and evaluation: NSF will continue to encourage the submission of proposals for research that would assess the effectiveness of policies aimed at keeping women in the STEM pipeline.
- Leverage and expand partnerships: NSF will leverage existing relationships with academic institutions to encourage the extension of the tenure clock and allow for dual hiring opportunities.

The Administration has been highly focused on the goal of increasing the participation of women and girls in STEM fields. The White House has encouraged and celebrated the participation of girls and women in STEM fields through initiatives like Educate to Innovate, which, among other goals, focuses on improving STEM education for underrepresented groups, including girls, and the President's $4.35 billion Race to the Top competition, which rewards states that develop

strategies to broaden the participation of women and girls and others underrepresented in science and engineering. To achieve this, states applying for these funds receive competitive preference if they demonstrate efforts to address barriers to full participation of women and girls in these fields.

Several independent organizations and academic associations announced initiatives in coordination with NSF and the White House, adding momentum to a nationwide shift that promises to strengthen the US economy and job security even as it strengthens families across the country. Among them:

- The White House Council on Women and Girls and Office of Science and Technology Policy are launching a "Women in STEM Speakers Bureau" designed to spark the interest of girls in grades 6–12 through engagement with women-scientist role models at the top of their fields.
- The National Alliance for Partnerships in Equity will announce an expansion of its signature initiative, the STEM Equity Pipeline, to provide professional development training for high-school and community college faculty and staff in STEM fields.

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Sonia Kovalevsky High School and Middle School Mathematics Days

Through a grant from the National Science Foundation (NSF), the Association for Women in Mathematics expects to support Sonia Kovalevsky High School and Middle 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 female high school or middle school 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 transitions between middle school and high school mathematics and 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 middle schools and high schools in their area.

AWM awards grants ranging on average from $1500 to $2200 each ($3000 maximum) 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 cover letter including the proposed date of the SK Day, expected number of attendees (with breakdown of 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;
- plans for activities, including specific speakers to the extent known;
- qualifications of the person(s) to be in charge;
- plans for recruitment, including the securing of diversity among participants;
- detailed budget (Please itemize all direct costs in budget, e.g., food, room rental, advertising, copying, supplies, student giveaways. 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. The grant does not permit reimbursement for indirect costs or fringe benefits.);
- local resources in support of the project, if any; and
- tentative follow-up and evaluation plans.

Organizers should send announcements including date and location of their SK Days to the AWM web editor for inclusion on the AWM website. If funded, a report of the event along with receipts (originals or copies) for reimbursement must be submitted to AWM within 30 days of the event date or by June 1, whichever comes first. Reimbursements will be made in one disbursement; no funds may be disbursed prior to the event date. The annual fall deadline is August 4, with a potential additional selection cycle with a deadline of February 4.

AWM anticipates awarding 12 to 20 grants for Fall 2012 and Spring 2013 pending funding. Applications must be received by **February 4, 2012**. Application decisions will be made in late February.

Applications materials should be sent as ONE pdf file. Visit https://sites.google.com/site/awmmath/programs/kovalevsky-days for specific online application instructions. Applications by mail or fax will not be accepted. For further information, call 703-934-0163 or email awm@awm-math.org.

Scientific Workspace Flexibility Policies

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- The Association for Women in Science is launching a new STEM workplace initiative to promote gender equality and retention, re-entry, and re-training for women.
- The National Girls Collaborative Project will announce the FabFems Project to promote career development for young female STEM students.
- The American Association of University Women will announce the expansion of regional programs aimed at engaging girls in STEM subjects to a national level.
- The Association of American Universities and the Association of Public Land-grant Universities will commit to looking for ways that the many institutions they represent can do more to develop, support, and promote more flexible work and learning environments for those in STEM and other disciplines.

In Memoriam

Diane Kalish

Gilbert Kalish, Distinguished Professor of Music, Stony Brook University

My wife, Diane Kalish, passed away from a massive stroke on July 18, 2011. Diane was a woman of great achievement and courage. She graduated with honors from Brooklyn College in 1958 and began graduate studies at the NYU. These studies were interrupted by the birth of our first child. After having three children, Diane went back to school, first at Yeshiva University and then, when that program was terminated, she transferred to CUNY. While raising three children and working as a math teacher at both the high school and college level (Lehman College and Fordham University) she completed her Ph.D. at the age of 50. She then gained appointment to a position at William Paterson University of New Jersey and achieved tenure. For the past five years she has devoted herself to designing and implementing a Masters program for middle and high school teachers. This had just been put into place and started this fall. She was in perfect health and was looking forward to the first year of this terribly important program when she was struck down. We have asked that contributions be made in her name to the Association for Women in Mathematics, and I thought it would be helpful for you to know something about this remarkable and gallant lady.

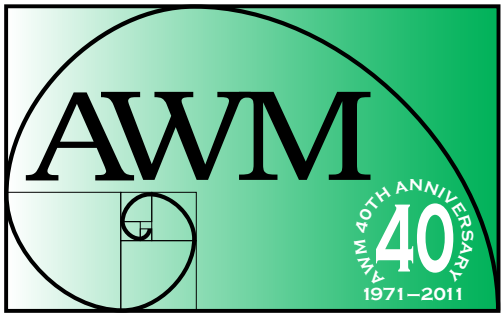
Websites of Interest

Founded in 1974, the Clayman Institute for Gender Research at Stanford University is one of the nation's most distinguished research organizations devoted to the study of gender. The Clayman Institute creates knowledge and seeks to implement change that promotes gender equality at Stanford, nationally, and internationally. Their website http://gender.stanford.edu/ includes sections on Women in Technology and Dual-Career Academic Couples. The dual-career page says:

> Meeting the needs and expectations of dual-career academic couples—while still ensuring the high quality of university faculty—is one of the great challenges facing universities. Academic couples (those with both partners working in an academic environment) comprise 36 percent of the American professoriate—representing a deep pool of talent. Yet, dual-career academic hiring often remains difficult and controversial.
>
> The Clayman Institute's Dual-Career Academic Couples program includes resources for administrators and for faculty and graduate students interested in negotiating a dual-career life.

Typing in www.coache.org will redirect you to the website of COACHE: The Collaborative on Academic Careers in Higher Education. Based at the Harvard Graduate School of Education and supported by member institutions, COACHE gathers peer diagnostic data for chief academic offers to improve the recruitment, retention, and development of faculty at colleges and universities. Several reports are available online to anyone. In 2010, the results of their survey on pre-tenure faculty job satisfaction were announced. Institutions deemed exemplary in various parameters may be found at the website. This year, a survey is in progress to examine tenured faculty job satisfaction.

AAUP's website, www.aaup.org, has many useful reports posted. For example, "Recommendations on Partner Accommodation and Dual Career Appointments" is available, whether or not you are a member.



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By now you should have received your renewal notices for the 2011–2012 membership year. We hope that you will renew promptly, if you have not already done so, and that you will encourage your institution and colleagues to join. In addition to your annual membership dues, please consider making a donation or raising your donation to a higher level to the AWM Annual Giving Campaign, the AWM Alice T. Schafer Prize Fund, or the AWM Anniversary Endowment Fund. These donations are tax-exempt. Any donation is welcome!

We extend our annual special thank-yous to the sponsors, contributing members, contributors, and institutional members who made donations between July 1, 2010 and June 30, 2011 by listing them here. We also thank those who prefer to remain anonymous.

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Association for Symbolic Logic ASL Travel Awards

Student Travel Awards: The 2012 ASL North American Annual Meeting, 2012 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 2012 ASL North American Annual Meeting in Madison, WI, or the 2012 ASL European Summer Meeting in Manchester, England; see below for information about these meetings. 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 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 North American Annual Meeting and the European Summer Meeting is supported by a grant from the US National Science Foundation; Note that NSF funds for meetings outside of North America 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 flag carrier. Application by email is encouraged; put "ASL travel application" in the subject line of your message.

For the 2012 ASL North American Annual Meeting, applications and recommendations should be received before the deadline of December 19, 2011, by the Program Chair: Bradd Hart, Dept. of Math. & Statistics, McMaster University, 1280 Main Street West, Hamilton, Ontario, Canada L8S 4K1; Fax: 905-522-0935; email: hartb@mcmaster.ca. Applications by email are preferred.

For the 2012 ASL European Summer Meeting, applications and recommendations should be received before the deadline of March 23, 2012, by the Organizing Committee: Alex Wilkie, Chair of the Organizing Committee, LC2012, c/o Alex Wilkie, School of Mathematics, The Alan Turing Building, University of Manchester, Manchester M13 9PL, UK; email: lc2012@manchester.ac.uk.

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.

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.

FAIRFIELD UNIVERSITY

Assistant Professor in Mathematics

Tenure Track Position

The Department of Mathematics and Computer Science at Fairfield University invites applications for one tenure track position in mathematics, at the rank of assistant professor, to begin in September 2012. We seek a highly qualified candidate with a commitment to and demonstrated excellence in teaching, and strong evidence of research potential. A doctorate in mathematics or a related filed is required. The teaching load is 3 courses/9 credit hours per semester and consists primarily of courses at the undergraduate level. The successful candidate will be expected to teach a wide variety of courses from elementary calculus and statistics to graduate level courses; in particular, Fairfield University's core curriculum includes two semesters of mathematics for all undergraduates.

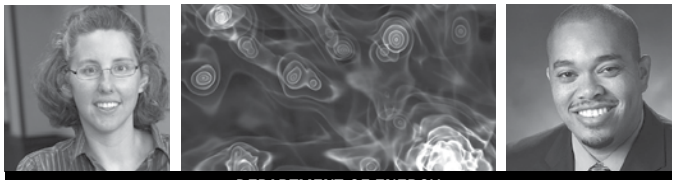
Special consideration will be given to candidates in applied areas of mathematics, or to those who are interested in playing an active role in our statistics curriculum.

Fairfield University is a Catholic Jesuit institution and is consistently ranked as a top comprehensive university in New England. It is located in the scenic shoreline community of Fairfield, CT, one hour from New York City along Long Island Sound. Our six Colleges and Professional Schools enroll approximately 3500 undergraduate and 1200 graduate students with a strong emphasis on liberal arts education. The department of Mathematics and Computer Science has an active faculty of 15 full-time tenured or tenure track members. We offer a BS and an MS in mathematics, as well as a BS in computer science. The MS program is an evening program and attracts students from various walks of life - secondary school teachers, eventual Ph.D. candidates, and people working in industry or business, among others.

Fairfield offers competitive salaries and compensation benefits. Fairfield is an Affirmative Action/Equal Opportunity Employer.

How to Apply: Applicants are required to apply electronically through MathJobs.org<http://MathJobs.org> (www.mathjobs.org<http://www.mathjobs.org>). For full consideration, please submit an application with all supporting materials by the deadline stated below . Applications must include the following: a curriculum vitae, teaching and research statements, and three letters of recommendation commenting on the applicant's experience and promise as a teacher and scholar. Reference letter writers should be asked to submit their letters online through MathJobs.org<http://MathJobs.org>. If they are unable to do so, they may send their letters to the following address: **Matt Coleman, Chair of the Department of Mathematics and Computer Science, Fairfield University, 1073 N. Benson Rd., Fairfield CT 06824-5195**. Full consideration will be given to complete applications received by December 9, 2011. We will be interviewing at the Joint Mathematics Meetings in Boston, January 4-7, 2012. Please let us know if you will be attending.

Fairfield UNIVERSITY



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The Krell Institute
1609 Golden Aspen Drive, Suite 101
Ames, IA 50010
515.956.3696
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www.krellinst.org/csgf

The Department of Mathematical Sciences at Binghamton University

(State University of New York at Binghamton) invites applications for at least one tenure-track position at the rank of assistant/associate professor beginning Fall 2012.

First consideration will be given to candidates in all areas of statistics and probability. Second consideration will be given to candidates in topology/geometry and all areas of mathematics in which the department already has some presence. We also anticipate funding for several postdoc positions in areas of interest to the department.

The Department of Mathematical Sciences seeks to expand its statistics group. The group currently consists of five statisticians and is in charge of undergraduate service courses in statistics, an undergraduate actuarial program, and a PhD program in statistics. There are also opportunities for collaboration with colleagues from other departments such as Biology and Bioengineering.

Applicants must apply electronically at http://www.mathjobs.org. Applications received before **November 13, 2011** are guaranteed full consideration. The position will remain open until filled.

Binghamton University is an equal opportunity/affirmative action employer.

Tenure-Track Professor: Operations Research and Information Engineering
Position #15976

Cornell University, located in Ithaca, New York, is an inclusive, dynamic, and innovative Ivy League university and New York's land-grant institution. Its staff, faculty, and students impart an uncommon sense of larger purpose and contribute creative ideas and best practices to further the university's mission of teaching, research, and outreach.

Cornell University's School of Operations Research and Information Engineering (ORIE) seeks to fill tenured/tenure-track faculty positions, with one position (unrestricted in rank) in Financial Engineering (FE), and one or more positions (at the Assistant or junior Associate Professor level) in Applied OR. Applied OR applicants with research interests that intersect strongly with information engineering/technology, or with energy/sustainability, are of primary interest.

Requisite is a strong interest in the broad mission of the School, an ability and willingness to teach at all levels of the program, strong potential for leadership in research and education, and a Ph.D. in Operations Research, Mathematics, Statistics, or a related field by the start of the appointment. Salary will be appropriate to qualifications and engineering school norms.

Cornell ORIE is a diverse group of high-quality researchers and educators interested in probability, optimization, statistics, simulation, and a wide array of applications such as manufacturing, supply chains, scheduling, transportation systems, health care, financial engineering, service systems and network science. We value mathematical and technical depth and innovation, and experience with applications and practice. Ideal candidates will have correspondingly broad training and interests.

Please apply online at:

https://academicjobsonline.org/ajo/jobs/1058

Applications received by December 31, 2011 will be given earliest consideration.

ORIE and the College of Engineering at Cornell embrace diversity and seek candidates who can contribute to a welcoming climate for students of all races and genders. Cornell's Dual Career program seeks to meet the needs of dual career couples. We strongly encourage qualified women and minority candidates to apply.

Cornell University
Cornell University is an affirmative action/ equal opportunity employer and educator.

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AMERICAN UNIVERSITY — The College of Arts and Sciences at American University (Washington, DC) invites applications for a full-time, tenure-track position, beginning in Fall 2012, in applied mathematics with a focus in computational life sciences, probability, image and signal processing, or applied cryptography. The rank of this position is Assistant Professor or Associate Professor. In the latter case, depending on qualifications, the appointee to this position may be recommended for tenure at the time of hiring. See www.american.edu/hr for further details on the position and how to apply. American University is an EEO/AA institution, committed to a diverse faculty, staff, and student body. Women and minority candidates are strongly encouraged to apply. American University offers employee benefits to same-sex domestic partners of employees and prohibits discrimination on the basis of sexual orientation/preference and gender identity/expression.

BROWN UNIVERSITY—MATHEMATICS DEPARTMENT—J. D. Tamarkin Assistant Professorship: Two three-year non-tenured non-renewable appointments, beginning July 1, 2012. The teaching load is one course one semester, and two courses the other semester and consists of courses of more than routine interest. Candidates are required to have received a Ph.D. degree or equivalent by the start of their 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, applicants must submit a curriculum vitæ, an AMS Standard Cover Sheet and three letters of recommendation by **December 1, 2011**. Please submit all application materials on line at http://www.mathjobs.org. 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.

BOSTON UNIVERSITY—Multiple Positions—The Department of Mathematics and Statistics invites applications for the following two positions: **Tenure-track Assistant Professor** level in **Geometry**, especially in the field of Algebraic Geometry. Ph.D. required, salary commensurate with experience. The position will begin in Fall 2012, subject to final budgetary approval. Strong commitment to research and teaching is essential. Please submit the AMS Application Cover Sheet, CV, research statement, teaching statement, and at least four letters of recommendation, one of which addresses teaching, to http://www.mathjobs.org/jobs. Alternatively, send all material to Geometry Search, Department of Mathematics and Statistics, Boston University, 111 Cummington St., Boston, MA 02215; two-year **Post-Doctoral** position in **Geometry** starting Fall 2012, pending budgetary approval. Strong commitment to research and teaching is essential. Submit the AMS cover sheet, CV, research statement, teaching statement and at least four letters of recommendation, one of which addresses teaching, to http://www.mathjobs.org/jobs. Alternatively, send all material to Geometry Postdoctoral Search, Department of Mathematics and Statistics, Boston University, 111 Cummington St., Boston, MA 02215. Application deadline January 2, 2012. Boston University is an Affirmative Action, Equal Opportunity employer.

BOWDOIN COLLEGE—Tenure-track position (assistant professor rank in statistics beginning Fall 2012. Teaching two courses per semester, including introductory and major-level statistics and probability. Ph.D. preferred, advanced ABDs considered. Visit http://www.MathJobs.org to apply. Review begins 11/14/11. Bowdoin College is committed to equality through Affirmative Action, and is an equal opportunity employer. For a full description of the position and further information about the college, see www.bowdoin.edu.

DARTMOUTH—John Wesley Young Research Instructorships, 2-3 years, new or recent Ph.D. graduates whose research overlaps a department member's. Teach 3 ten-week courses spread over 3 terms. Appointment for 26 months, with possible 12 month renewal; monthly salary of $4,950, including two-month research stipend for Instructors in residence during 2 of 3 summer months; if not in residence, salary adjusted accordingly. To initiate an application go to http://www.mathjobs.org – Position ID: JWY #2935. You can also access the application through a link at http://www.math.dartmouth.edu/activities/recruiting/. General inquiries can be directed to Stephanie Kvam, Administrative Assistant, Department of Mathematics, email stephanie.kvam@dartmouth.edu or 603-646-2415. Applications completed by **January 5, 2012** considered first. Dartmouth College is committed to diversity and strongly encourages applications from women and minorities.

DARTMOUTH—Instructorships in Applied and Computational Mathematics, 2-3 years, new or recent Ph.D. graduates with research interest in applied and computational mathematics. Teach 3 ten-week courses spread over 3 terms. Appointment for 26 months, with possible 12 month renewal; monthly salary of $4,950, including two-month research stipend for Instructors in residence during 2 of 3 summer months; if not in residence, salary adjusted accordingly. To initiate an application go to http://www.mathjobs.org – Position ID: IACM #2948. You can also access the application through a link at http://www.math.dartmouth.edu/activities/recruiting/. General inquiries can be directed to Stephanie Kvam, Administrative Assistant, Department of Mathematics: stephanie.kvam@dartmouth.edu or 603-646-2415. Applications completed by **January 5, 2012** considered first. Dartmouth College is committed to diversity and strongly encourages applications from women and minorities.

GEORGIA INSTITUTE OF TECHNOLOGY—Faculty Positions—The School of Mathematics at Georgia Tech is accepting applications for faculty positions at all ranks and in all areas of Pure and Applied Mathematics and Statistics. Applications by highly qualified candidates from groups underrepresented in the mathematical sciences are particularly encouraged. See www.math.gatech.edu/resources/employment for more details and application instructions.

JOHNS HOPKINS UNIVERSITY—DEPARTMENT OF MATHEMATICS—Subject to availability of resources and administrative approval, the Department of Mathematics invites applications for one or more positions at the tenure track or tenured positions at the Associate Professor or Full Professor level beginning fall 2012 or later. Candidates in all areas of pure mathematics are encouraged to apply. **To submit your applications go t**o www.mathjobs.org/jobs/jhu. **Applicants are strongly advised to submit their other materials electronically at this site.** Submit the AMS cover sheet, a curriculum vitae, a list of publications, and the names and addresses of three references. Applicants should indicate whether they are applying for an associate professor or a full professor position. The department will assume responsibility to solicit letters of evaluation and will provide evaluators with a copy of the summary of policies on confidentiality of letters of evaluation. If you do not have computer access, you may mail your application to: Appointments Committee, Department of Mathematics, Johns Hopkins University, 404 Krieger Hall, Baltimore, MD 21218. Write to cpoole@jhu.edu for questions concerning these positions. Applications received by **December 1, 2011** will be given priority. The Johns Hopkins University is an Affirmative Action/Equal Opportunity Employer. Minorities and women candidates are encouraged to apply.

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JOHNS HOPKINS UNIVERSITY—Non-Tenure-Track J.J. Sylvester Assistant Professor—Subject to availability of resources and administrative approval, the Department of Mathematics solicits applications for non-tenure-track Assistant Professor positions beginning Fall 2012. The J.J. Sylvester Assistant Professorship is a three-year position offered to recent Ph.D.'s with outstanding research potential. Candidates in all areas of pure mathematics, including analysis, mathematical physics, geometric analysis, complex and algebraic geometry, number theory, and topology are encouraged to apply. The teaching load is three courses per academic year. **To submit your applications go to** www.mathjobs.org/jobs/jhu. **Applicants are strongly advised to submit their other materials electronically at this site.** If you do not have computer access, you may mail your application to: Appointments Committee, Department of Mathematics, Johns Hopkins University, 404 Krieger Hall, Baltimore, MD 21218. Application should include a vita, at least four letters of recommendation of which one specifically comments on teaching, and a description of current and planned research. Write to cpoole@jhu.edu for questions concerning these positions. Applications received by **December 1, 2011** will be given priority. The Johns Hopkins University is an Affirmative Action/Equal Opportunity Employer. Minorities and women candidates are encouraged to apply.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY—DEPARTMENT OF MATHEMATICS—The Mathematics Department at MIT is seeking to fill positions in **Pure and Applied Mathematics, Statistics, and Applied Probability** at the level of Instructor, Assistant Professor or higher beginning September 2012. At the same time, the Department seeks candidates for the positions of Simons Postdoctoral Fellow, Schramm Postdoctoral Fellow, and ENSW21 Postdoctoral Fellow. Appointments are based primarily on exceptional research qualifications. Appointees will be expected to fulfill teaching duties and to pursue their own research program. PhD required by employment start date. For more information, and to apply, please visit www.mathjobs.org. To receive full consideration, please submit applications by **December 1, 2011**. Recommendations should be submitted through mathjobs.org, but may also be sent as PDF attachments to hiring@math.mit.edu, or as paper copies mailed to: Mathematics Search Committee, Room 2-345, Department of Mathematics, MIT, 77 Massachusetts Ave., Cambridge, MA 02139-4307. Please do not mail or e-mail duplicates of items already submitted via mathjobs. MIT is an Equal Opportunity, Affirmative Action Employer.

NORTHWESTERN UNIVERSITY—Ralph Boas Assistant Professor—The Ralph Boas Assistant Professorship is a three-year, non-tenure-track position beginning September 2012, with a teaching load of four one-quarter courses per year. Applications are invited from qualified mathematicians in all fields. As many as three appointments may be made. Applications should be made electronically at www.mathjobs.org and should include (1) the American Mathematical Society Cover Sheet for Academic Employment, (2) a curriculum vitae, (3) a research statement, and (4) three letters of recommendation, one of which discusses the candidate's teaching qualifications. Inquiries may be sent to: boas@math.northwestern.edu. The review process starts December 1, 2011. Northwestern University is committed to fostering a diverse faculty; women and minority candidates are especially encouraged to apply. AA/EOE.

PURDUE UNIVERSITY—Assistant Professor of Mathematics—The Mathematics Department at Purdue University invites applications for appointments in mathematics at the level of tenure track assistant professor for August 2012. Appointments will be made based on demonstrated research and teaching qualifications. Ph.D. (or its equivalent) in mathematics or a closely related field is required. The target areas are geometry, analysis, and computational and applied mathematics, but outstanding candidates in all areas will be considered. Duties: Conduct research in mathematics. Teach undergraduate and/or graduate mathematics courses. Applications should be submitted online through www.mathjobs.org and should include (1) the AMS cover sheet for academic employment, (2) a curriculum vitae, (3) a research statement, and (4) four letters of recommendation, one of which discusses the candidate's teaching qualifications. Reference letter writers should be asked to submit their letters online through www.mathjobs.org. Direct all inquiries to goeke@math.purdue.edu. Applications are considered on a continuing basis but candidates are urged to apply by **November 15, 2011**. For information about our department, see www.math.purdue.edu/. A background check will be required for employment in this position. Purdue University is an Equal Opportunity/Equal Access/Affirmative Action Employer fully committed to achieving a diverse workforce.

THE OHIO STATE UNIVERSITY, Columbus, Ohio—Department of Mathematics, Tenure Track Assistant Professor—The Department of Mathematics in the College of Arts and Sciences at The Ohio State University anticipates having a tenure-track assistant professor position available in Analysis, effective Autumn Quarter 2012. Further information about the department can be found at http://www.math.ohio-state.edu. Candidates are expected to have a Ph.D. in mathematics (or related area) and to present evidence of excellence in teaching and research. Applications will be considered on a continuing basis, but the annual review process begins **November 14, 2011**. Applications should be submitted online at http://www.mathjobs.org. If you cannot apply online, please contact facultysearch@math.ohio-state.edu or write to: Hiring Committee, Department of Mathematics, The Ohio State University, 231 W. 18th Avenue, Columbus, OH 43210. To build a diverse workforce Ohio State encourages applications from individuals with disabilities, veterans and women. EEO/AA employer.

THE OHIO STATE UNIVERSITY, Columbus, Ohio—Department of Mathematics, Tenure Track (Rank Open)—The Department of Mathematics in the College of Arts and Sciences at The Ohio State University anticipates having a tenure-track position available in Probability, rank open, effective Autumn Quarter 2012. Further information about the department can be found at http://www.math.ohio-state.edu. Candidates are expected to have a Ph.D. in mathematics (or related area) and to present evidence of excellence in teaching and research. Applications will be considered on a continuing basis, but the annual review process begins N**ovember 14, 2011**. Applications should be submitted online at http://www.mathjobs.org. If you cannot apply online, please contact facultysearch@math.ohio-state.edu or write to: Hiring Committee, Department of Mathematics, The Ohio State University, 231 W. 18th Avenue, Columbus, OH 43210. To build a diverse workforce Ohio State encourages applications from individuals with disabilities, veterans and women. EEO/AA employer.

TEXAS A&M UNIVERSITY—Postdoctoral positions—The Department of Mathematics anticipates several openings for postdoctoral positions at the level of Visiting Assistant Professor, subject to budgetary approval. Our Visiting Assistant Professor positions are three-year appointments 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. We also anticipate several short-term (semester or year-long) visiting positions at various ranks, depending on budget. A complete dossier should be received by **December 15, 2011**. Early applications are encouraged since the department will start the review process in October, 2011. Applicants should send the completed "AMS Application Cover Sheet," a vita, a summary statement of research and teaching experience, and arrange to have letters of recommendation sent to: Faculty Hiring, Department of Mathematics, Texas A&M University, 3368 TAMU, 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, and veterans. The University is responsive to the needs of dual career couples.

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UNIVERSITY OF DENVER—Department of Mathematics—The Department of Mathematics at the University of Denver invites applications for a tenure-track faculty position in mathematics at the Assistant Professor level to begin in the fall of 2012. Candidates must have a Ph.D. in mathematics by September 2012 and show a commitment to excellence in both research and teaching. All research areas will be considered but we are especially interested in people whose work overlaps with the research of current faculty. Active areas of research include combinatorics, functional analysis, logic, non-associative algebra, operator theory, ordered algebra, set theory, topological dynamics and ergodic theory. Applications received by **January 1, 2012** will be given full consideration. The search will continue until the position is filled. Applicants should apply electronically to www.mathjobs.org. The University of Denver is committed to enhancing the diversity of its faculty and staff and encourages applications from women, minorities, people with disabilities and veterans. DU is an EEO/AA employer.

UNIVERSITY OF PENNSYLVANIA—Tenure-track Assistant Professorship in Mathematics—One tenure-track Assistant Professorship in Mathematics will be available for the academic year beginning July 1, 2012. Candidates must have an outstanding research program and will participate in the Department's undergraduate and graduate teaching mission. Applications should be submitted online through www.mathjobs.org. For further information, please contact personnel@math.upenn.edu or Personnel Committee, Department of Mathematics, University of Pennsylvania, Philadelphia, PA 19104-6395. The University of Pennsylvania is an affirmative action/equal opportunity employer.

UNIVERSITY OF PENNSYLVANIA—Nontenure-Track Junior Positions—Lecturer—At least one position will be available beginning July 1, 2012. Candidates should have a strong research program and will participate in the Department's undergraduate and graduate teaching mission. Applications should be submitted online through www.mathjobs.org. For further information, please contact personnel@math.upenn.edu or Personnel Committee, Department of Mathematics, University of Pennsylvania, Philadelphia, PA 19104-6395. The University of Pennsylvania is an affirmative action/equal opportunity employer.

UNIVERSITY OF SOUTH FLORIDA—The Department of Mathematics & Statistics at the University of South Florida is recruiting for a tenure-track, 9-month, Assistant Professor position with a start date of August 7, 2012. Applications are invited in the areas of Pure & Applied Discrete Mathematics. Research interests include, but are not limited to, algebra, combinatorics, and computation theory. The successful candidate must have a Ph.D. in Mathematics or related field, and must demonstrate excellence in research. The Department strongly prefers a candidate that possesses a potential for excellence in teaching and experience beyond a Ph.D. In order to be complete, the application packet must include a curriculum vita, a research statement, and three letters of recommendation. Additional helpful supplements include a statement of teaching philosophy and a sample of two to three reprints. The application packet, including supplements, must be submitted through Careers@USF (https://employment.usf.edu/applicants/Central?quickFind=57460). Please have letters of recommendation sent to: Brian Curtin, Chair of the Search Committee, Department of Mathematics and Statistics, University of South Florida, 4202 E. Fowler Avenue, PHY 114, Tampa, FL 33620-5700. The deadline for submission of applications is **December 15, 2011**. According to Florida Law, all applications and meetings regarding them are open to the public. For ADA accommodations, please contact Denise L. Marks at 813-974-9747 at least five working days prior to need. USF is an EO/EA university.

UNIVERSITY OF SOUTHERN CALIFORNIA—Tenure-track assistant professor—The Department of Mathematics in the Dana and David Dornsife College of Letters, Arts, and Sciences of the University of Southern California seeks to fill a tenure-track Assistant Professor position with an anticipated start date of August 2012. Candidates in all fields of mathematics will be considered. They should have demonstrated excellence in research and a strong commitment to graduate and undergraduate education. A doctoral degree is required at the time of appointment. To apply, please submit the following materials: letter of application and curriculum vitae, including your e-mail address, telephone and fax numbers, preferably with the standardized AMS Cover Sheet. Candidates should also arrange for at least three letters of recommendation to be sent, at least one of which addresses teaching skills. Please submit applications electronically through MathJobs at www.mathjobs.org. As an alternative and only if necessary, materials can be mailed to: Search Committee, Department of Mathematics, Dornsife College of Letters, Arts and Sciences, University of Southern California, 3620 Vermont Avenue, KAP 108, Los Angeles, CA 90089-2532. In order to be considered for this position, applicants are also required to submit an electronic USC application; follow this job link or paste in a browser: https://jobs.usc.edu/applicants/Central?quickFind=61200. Review of applications will begin **November 15, 2011**. Additional information about the USC Dornsife's Department of Mathematics can be found at our web site: http://dornsife.usc.edu/mathematics/home/. USC strongly values diversity and is committed to equal opportunity in employment. Women and men, and members of all racial and ethnic groups are encouraged to apply.

UNIVERSITY OF SOUTHERN CALIFORNIA—Non-tenure-track Assistant Professor—The Department of Mathematics in the Dana and David Dornsife College of Letters, Arts and Sciences of the University of Southern California seeks to fill non-tenure-track Assistant Professor of Mathematics positions with an anticipated start date of August 2012. Candidates in all fields of mathematics will be considered. Candidates should demonstrate great promise in research and evidence of strong teaching, and will be required to teach three semester courses per year. Several positions are likely to be available. Applicants should have a doctoral degree in appropriate field of study. To apply, please submit the following materials: letter of application and curriculum vitae, including your e-mail address, telephone and fax numbers, preferably with the standardized AMS Cover Sheet. Candidates should also arrange for at least three letters of recommendation to be sent, at least one of which addresses teaching skills. Please submit applications electronically through MathJobs at www.mathjobs.org. As an alternative and only if necessary, materials can be mailed to: Search Committee, Department of Mathematics, Dornsife College of Letters, Arts and Sciences, University of Southern California, 3620 Vermont Avenue, KAP 108, Los Angeles, CA 90089-2532. In order to be considered for this position, applicants are also required to submit an electronic USC application; follow this job link or paste in a browser: https://jobs.usc.edu/applicants/Central?quickFind=61286. Review of applications will begin **December 1, 2011**, and will continue until the positions are filled. Additional information about the USC Dornsife's Department of Mathematics can be found at our web site at http://dornsife.usc.edu/mathematics/home/. USC strongly values diversity and is committed to equal opportunity in employment. Women and men, and members of all racial and ethnic groups are encouraged to apply.

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UNIVERSITY OF SOUTHERN CALIFORNIA—Non-tenure-track Assistant Professor (Teaching) positions—The Department of Mathematics in the Dana and David Dornsife College of Letters, Arts and Sciences of the University of Southern California seeks to fill non-tenure-track Assistant Professor (Teaching) positions of Mathematics with an anticipated start date of August 2012. This is a non-tenure-track appointment with a teaching load of six semester courses per year. Candidates should demonstrate excellence in undergraduate education and innovative teaching. Candidates applying to this promoted rank of Assistant Professor (Teaching) must also demonstrate that they have made an ongoing effort to develop their abilities as teachers, demonstrated excellence in teaching and service, and received strong annual performance reviews at a comparable institution of higher learning. Two positions are likely to be available. Applicants should have a doctoral degree in appropriate field of study. In addition to teaching, job duties for this position may include organizing and overseeing undergraduate research and other math-related activities on campus, running the department's Math Center, and interacting with Rossier School of Education on issues regarding mathematics education. To apply, please submit the following materials: letter of application and curriculum vitae, including your e-mail address, telephone and fax numbers, preferably with the standardized AMS Cover Sheet. Candidates should arrange for three letters of recommendations to be sent addressing their teaching skills and achievements. Please submit applications through MathJobs at www.mathjobs.org. As an alternative and only if necessary, materials can be mailed to: Search Committee, Department of Mathematics, Dornsife College of Letters, Arts and Sciences, University of Southern California, 3620 Vermont Avenue, KAP 108, Los Angeles, CA 90089-2532. In order to be considered for this position, applicants are also required to submit an electronic USC application; follow this job link or paste in a browser: https://jobs.usc.edu/applicants/Central?quickFind=61281 Review of applications will begin **November 15, 2011**, and will continue until the positions are filled. Additional information about the USC Dornsife's Department of Mathematics can be found at our web site: http://dornsife.usc.edu/mathematics/home/. USC strongly values diversity and is committed to equal opportunity in employment. Women and men, and members of all racial and ethnic groups are encouraged to apply.

VASSAR COLLEGE —The Department of Mathematics at Vassar College invites applications for a tenure-track position at the rank of assistant professor beginning Fall 2012. Vassar College is an equal opportunity/affirmative action employer and is strongly and actively committed to diversity within its community. Applications from members of historically underrepresented groups are especially encouraged. The ideal candidate will be committed to excellence in teaching, have a promising research program, and have a Ph.D. in mathematics by the start date of the appointment. All fields of mathematics will be considered. Information about the department and its faculty can be obtained from the department web site http://math.vassar.edu. Teaching load in the first year is four courses; after that it is five courses per year. Please submit applications on-line at MathJobs.org, or mail applications to John McCleary, Box 257, Department of Mathematics, Vassar College, 124 Raymond Avenue, Poughkeepsie, NY 12604-0257. A complete application will include a cover letter explaining interest in the position at Vassar, a curriculum vitae, at least three letters of recommendation (at least one of which primarily addresses teaching), a description of research accomplishments and plans for the nonspecialist, and a statement of teaching philosophy. For full consideration applications should be received by **December 15, 2011**.

WASHINGTON UNIVERSITY IN ST. LOUIS—Tenure-Track Faculty—The Mathematics Department of Washington University in St. Louis is announcing an opening for a William Chauvenet Post-doctoral lecturer position in pure mathematics, to begin August 2012. Responsibilities include teaching three one semester courses per year, maintaining a strong research program, publishing the results of the research, and minor administrative duties. Mathematicians in all areas will be considered, but special consideration will be given to applicants in the fields of Analysis, especially Harmonic Analysis and Wavelets. A Ph.D. in mathematics is required before taking up the position. Applicants should provide their CV, publication list, research and teaching statements, and arrange for four letters of recommendation to be submitted. At least one of the letters should report on the applicant's teaching abilities. Applicants are encouraged to submit this material using the AMS mathjobs website www.mathjobs.org/jobs, the position ID is WashingtonUniv-CHAUV [#3047]); however, it may be sent directly to the Chair, Department of Mathematics. The department will begin reviewing applications on **October 24, 2011**, and continue until the position is filled, Washington University is an affirmative action/equal opportunity employer and specifically invites and encourages women and minorities to apply. Employment eligibility verification required on hire. For more information about the position or the department, visit www.math.wustl.edu. Washington University in St. Louis Department: Mathematics; Employer type: Academic; Type of position: Chauvenet Post-doctoral Lecturer; Subject area: Analysis, especially Harmonic Analysis or Wavelets; Application deadline: January 1, 2012; Contact Person: David Wright, Chair; Address: Department of Mathematics, Washington University, One Brookings Drive, Campus Box 1146, St. Louis, MO. 63130; E-mail address: wright@math.wustl.edu.

WASHINGTON UNIVERSITY IN ST. LOUIS—Two tenure-track openings in pure mathematics—The Mathematics Department of Washington University in St. Louis, MO, is announcing two openings for tenure-track Assistant Professors in pure mathematics, to begin August 2012. If exceptional senior candidates apply, the department may be able to consider them. Responsibilities include teaching three one semester courses per year, maintaining a strong research program, publishing the results of the research, and minor administrative duties. Mathematicians in all areas will be considered, but special consideration will be given to applicants in the field of Analysis, broadly construed. A Ph.D. in mathematics is required. The department expects to have several more open positions in the upcoming years. Applicants should provide their CV, publication list, research and teaching statements, and arrange for four letters of recommendations to be submitted. At least one of the letters should report on the applicant's teaching abilities. Applicants are encouraged to submit this material using the AMS mathjobs website: www.mathjobs.org/jobs, the position ID is WashingtonUniv-TEN [#2923]); however it may be sent directly to the Chair, Department of Mathematics. The department will begin reviewing applications on October 24, 2011, and continue until the positions are filled. Washington University is an affirmative action/equal opportunity employer and specifically invites and encourages women and minorities to apply. Employment eligibility verification required on hire. For more information about the position or the department, visit wumath.wustl.edu. Department: Mathematics, Employer Type: Academic, Type of Position: Tenure-Track Faculty, Subject Area: Mathematics, Geographic Location: Missouri, Application Deadline: None. Contact Person: David Wright Chair, Address: Department of Mathematics, Washington University, One Brookings Drive, Campus Box 1146, St. Louis, MO. 63130, E-mail Address: wright@math.wustl.edu

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WILLIAMS COLLEGE—Tenure-track positions in Statistics—The Williams College Department of Mathematics and Statistics invites applications for two tenure-track positions in statistics, beginning fall 2012, at the rank of assistant professor (in an exceptional case, a more advanced appointment may be considered). We are seeking highly qualified candidates who have demonstrated excellence in teaching and research, and who will have a Ph.D. by the time of appointment. The candidates will become the third and fourth tenure-track statisticians in the department, joining a vibrant and active statistics group. 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, 18 Hoxsey Street, 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. For more information on the Department of Mathematics and Statistics, visit http://math.williams.edu/. Williams College is a coeducational liberal arts institution located in the Berkshire Hills of western Massachusetts with easy access to the culturally rich cities of Albany, Boston, and New York City. The College is committed to building and supporting a diverse population of approximately 2,000 students, and to fostering an inclusive faculty, staff and curriculum. Williams has built its reputation on outstanding teaching and scholarship and on the academic excellence of its students. Please visit the Williams College website http://www.williams.edu/. Beyond meeting fully its legal obligations for non-discrimination, Williams College is committed to building a diverse and inclusive community where members from all backgrounds can live, learn, and thrive.

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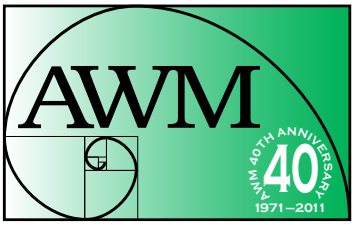

ASSOCIATION FOR WOMEN IN MATHEMATICS

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