AWM
ASSOCIATION FOR WOMEN IN MATHEMATICS

Newsletter

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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

A long introduction: In September 2006, when former AWM president **Barbara Keyfitz** was director of the Fields Institute, Barbara invited me and **Renate Scheidler** to lunch in Toronto to discuss our plans to run WIN (Women In Numbers), the first in what is now a series of Research Collaboration Conferences for Women (RCCWs). Barbara suggested that we apply through the usual scientific process to run the conference at the Banff International Research Station (BIRS). She advised competing for funding through standard channels rather than running a program for women within the context of an established semester-long program at the Fields Institute, to avoid the separate-but-not-equal phenomenon: a workshop within a larger focused scientific program which may be viewed as second-class because it is focused only on supporting women, and which could force female research leaders to choose between speaking at the "women's" workshop and being an invited speaker at one of the usual workshops.

The WIN model for RCCWs is as follows: organizers invite senior women in a focused area of math (for WIN it is number theory) to propose research problems and run collaboration groups at a week-long conference. Junior participants and graduate students apply to the conference and are selected and assigned to groups in advance of the conference. Each group consists of junior and senior women working together during the conference, with junior members presenting intermediate results on the last day. Then groups continue to work together after the conference to finish their project and publish their results in a proceedings volume for the conference. Publishing the work together helps the groups form lasting bonds through long-term collaborations and mentoring relationships. The WIN model has since been adopted in a number of other areas of mathematics, and AWM has been supporting the follow-up steps for all these networks, including publishing the proceedings volumes in our new AWM-Springer series and organizing follow-up workshops for the networks.

By launching WIN together, co-founders **Rachel Pries**, **Renate Scheidler** and I started a journey which has now been joined by many women research leaders and the leadership of AWM, and has led, nine years later, to the recent announcement that the AWM has been awarded a **5-year, $750,000 NSF ADVANCE grant** to foster Research Collaboration Networks for Women, on the model of WIN! Along the way, I had the great pleasure to meet then AWM President **Georgia Benkart** when we were staying together at the Korean Institute for Advanced Study (KIAS). We were both speaking at the annual conference of the Korean Women in Mathematical Sciences (KWMS), which brings together female professors of mathematics

continued on page 2

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.

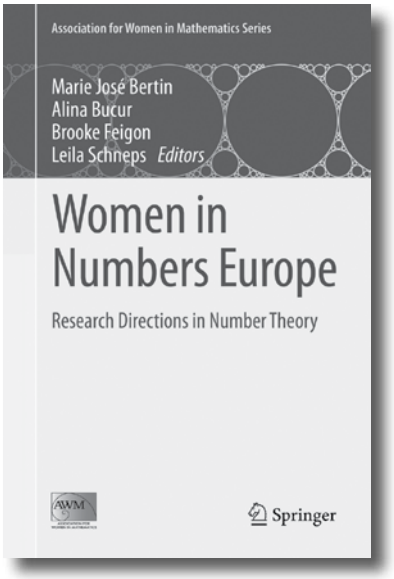
Opinions expressed in AWM *Newsletter* articles are those of the authors and do not necessarily reflect opinions of the editors or policies of the Association for Women in Mathematics. Authors sign consent to publish forms.

Circulation: 3500.

PRESIDENT'S REPORT *continued from page 1*

from all over Korea every year to speak on their research in special sessions and plenary talks. Georgia and I were both infected with the idea that the AWM could and should run such meetings to support and help advance professional women mathematicians at later stages in their research careers, beyond the postdoctoral stage. Several months later, Georgia asked me to join her and the next AWM President **Jill Pipher** to co-organize the first AWM Research Symposium to celebrate the 40th Anniversary of AWM, thereby launching a new tradition with eighteen special sessions and four plenary talks. I was truly thrilled!

Supporting and launching new focused research networks through the AWM Symposia and the follow-up AWM Workshops was the focus of the first ADVANCE proposal submitted in 2012 by co-PIs **Georgia Benkart**, **Ruth Charney**, Executive Director **Magnhild Lien**, and **Jill Pipher**. Jill wrote about the AWM Research Conferences and Collaboration Networks in her President's report in the January–February 2013 issue of this *Newsletter*. That same month was the first time the AWM Workshop at the Joint Math Meetings was run on the new model, featuring talks by *senior and junior women* in a focused area of mathematics as a follow-up directly linked to one of the RCCWs. I had the pleasure to co-organize the workshop with **Bianca Viray** as a follow-up to the WIN2 collaboration conference.



The **WIN Network** has a well-organized Steering Committee to recruit organizers for the upcoming conferences, an active email list to spread news of grants, jobs, events, and awards, and an excellent website which is a resource to the broader community (womeninnumbertheory.org). WIN has now run four collaboration workshops and has published four proceedings volumes of research articles from WIN conferences (the WINE and WIN3 volumes are the second and third in the new AWM-Springer series), as well as a number of research articles in top journals which have arisen from collaborations started at WIN conferences. There are many outstanding tenure-track women in number theory at research universities who attended the first WIN conferences as graduate students and postdocs. Now they are leading the network! It is this template which we would like to copy in many areas of mathematics, and the AWM ADVANCE grant will support this mission.

Although the first ADVANCE proposal was not ultimately successful, it was a good learning experience, and in response to the feedback on the proposal, Ruth decided during her presidency that we would substantially strengthen the social science component of the proposal, hiring a social scientist to design a way to study the effectiveness of the proposed research networks for advancing careers for women in mathematics. An explicit goal of the NSF ADVANCE program is to study methods for advancing careers for women which can potentially be applied in other branches of science. Ruth, Magnhild, and I are the co-PIs on the current award, with **Erin Leahey** (University of Arizona) as Senior Personnel in charge of

Women in Numbers at WIN3, BIRS, April 2014

designing and running the follow-up surveys and study. The program will be run by Project Director **Magnhild Lien**, and **Kathryn Leonard** will serve on the Oversight Committee along with the three PIs.

and many thanks ... I love to trace the evolution of ideas, and the new ADVANCE grant is truly the result of the collaborative effort of many leading women in mathematics. By my count, the current AWM ADVANCE award is the result of the collective efforts of at least five AWM Presidents, the AWM Executive Director, inspiration from KWMS, and countless organizers of the focused research networks who have already organized RCCWs in their areas: WIN, WiSh, WIT, WhAM!, WIG, WINART, ACxx … and counting. Organizing an RCCW is truly a labor of love, a ton of work, and many would say the most rewarding thing they have ever done professionally. So these organizers deserve to be named and celebrated!

WIN: Besides the WIN co-founders (2008), the WIN organizers are: **Chantal David**, **Matilde Lalin**, **Michelle Manes** (WIN2, 2011), **Marie-José Bertin**, **Alina Bucur**, **Brooke Feigon**, **Leila Schneps** (WINE=WIN-Europe, 2013, Luminy), **Ling Long**, **Rachel Pries**, **Katherine Stange** (WIN3, 2014), with upcoming conferences organized by **Irene Bouw**, **Rachel Newton**, **Ekin Ozman** (WINE2, 2016, Turkey) and **Jennifer Balakrishnan**, **Chantal David**, **Michelle Manes**, **Bianca Viray** (WIN4, 2017). The WIN and WIN3 proceedings volumes were co-edited with the help of **Alina Cojocaru** and **Ellen Eischen** respectively.

WiSh: Women in Shape Modeling has been the first and only collaboration conference for women hosted at IPAM thus far, in 2013, organized by **Kathryn Leonard** and **Luminita Vese**. (AWM JMM Workshop 2014, first AWM-Springer volume).

WIT: Women in Topology was co-organized in 2013 by **Maria Basterra**, **Kristine Bauer**, **Kathryn Hess**, **Brenda Johnson** and WIT2 in 2016, by the same organizers. (AWM JMM Workshop 2015)

WhAM!: Women in Applied Math was the name chosen for the series of annual RCCWs at the IMA launched by IMA Director **Fadil Santosa**. Sadly, the

continued on page 4

Membership Dues
Membership runs from Oct. 1 to Sept. 30
Individual: $65 **Family:** $30
Contributing: $150
New member, affiliate and reciprocal members, retired, part-time: $30
Student, unemployed: $20
Outreach: $10
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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 queries/material for columns to Anne Leggett, leggett@member.ams.org. Send all book review queries/material to Marge Bayer, bayer@math.ku.edu. Send all education column queries/material to Jackie Dewar, jdewar@lmu.edu. Send all media column queries/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.

WhAM! series was suspended after two wildly successful conferences due to a demise in funding for the IMA. The first WhAM!: Dynamical Systems in Biology (2013) was organized by **Trachette Jackson** and **Ami Radunskaya**, and the proceedings are published in the IMA-Springer series. WhAM!2: Numerical Partial Differential Equations and Scientific Computing was organized by **Susanne Brenner**, **Sigal Gottlieb**, **Chiu-Yen Kao**, **Hyesuk Lee**, **Fengyan Li**, and **Carol Woodward** at the IMA in 2014. WhAM! and WhAM!2 will be followed up by the AWM Workshops at SIAM in 2016 and 2017.

Women in Math Bio was held at NIMBios in June 2015, organized by **Anita Layton**, with local organizer **Suzanne Lenhart**, and the proceedings, co-edited with **Laura Miller**, will appear in the AWM-Springer series.

WIG: Women in Geometry, and **WINART:** Women in Noncommutative Algebra and Representation Theory, are new networks in formation, both running conferences this year. WIG is being organized by **Ailana Fraser**, **Catherine Searle**, and **Elizabeth Stanhope** (November 2015) and will be followed by the AWM JMM 2017 Workshop. WINART (April 2016) is being co-organized by **Georgia Benkart**, **Ellen Kirkman**, **Susan Montgomery**, and **Chelsea Walton**.

ACxx: Algebraic Combinatorixx (2011) was organized by **Georgia Benkart**, **Stephanie van Willigenburg**, and **Monica Vazirani**. (AWM JMM Workshop 2016)

I was inspired to list and thank all the organizers of these conferences by Georgia Benkart's last president's report in which she thanked every person by name who had volunteered for AWM during her presidency! All RCCWs so far have taken place at BIRS unless stated otherwise, and we thank BIRS, IPAM, and the IMA profusely for their support. We are also indebted to **Microsoft Research**, which has generously co-sponsored all three AWM Research Symposia, all of the WIN conferences, and WiSh, WhAM! and WhAM!2. Travel funding for participants has been provided by grants from the Clay Institute, NSF, NSA, PIMS, and the Number Theory Foundation. For the last few years I have maintained an RCCW webpage which lists networks and the associated conferences along with the related AWM activities and other conferences for women in computer science co-sponsored by Microsoft Research (http://research.microsoft.com/en-us/projects/rccw/).

The AWM ADVANCE Grant: *Career Advancement for Women Through Research-Focused Networks:* The 5-year project will focus on establishing research networks for women by fostering research collaborations at conferences and AWM Workshops. The Research Collaboration Networks for Women which will be built and supported by AWM will be modeled on the WIN Network in number theory. These networks are spawned at RCCWs, the week-long conferences at mathematics institutes where junior and senior women come together to work on pre-defined research projects. The role of AWM will be to expand the number and scope of the RCCWs and to organize a series of follow-up events and infrastructure to help sustain and grow the resulting networks.

Each year, AWM Workshops at the annual Joint Mathematics Meetings and SIAM Annual Meetings will bring together women from one of the Research Collaboration Networks, along with some recent PhDs in the field, to showcase their work and encourage continued collaboration and mentoring. AWM will also

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AWM ONLINE

The *AWM Newsletter* is freely available online.

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

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

Web Editor

Adriana Salerno, awmwebeditor@gmail.com

AWM DEADLINES

AWM-SIAM Sonia Kovalevsky Lecture: November 1, 2015

AWM Workshop at SIAM 2016: November 1, 2015

Ruth I. Michler Memorial Prize: November 1, 2015

AWM Essay Contest: January 31, 2016

AWM Mentoring Travel Grants: February 1, 2016

AWM-Birman Research Prize: February 15, 2016

AWM Travel Grants: February 1 and May 1, 2016

AWM Louise Hay Award: April 30, 2016

AWM M. Gweneth Humphreys Award: April 30, 2016

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organize biennial Research Symposia, with high-profile plenary speakers and Special Sessions in research areas linked to the Research Collaboration Networks.

AWM will form a committee (RCCW Committee) to help develop new networks in focused research areas. There will be deadlines for proposals, and the committee will help to match potential networks with the math institutes to host the first collaboration conference for the network. AWM also plans to host websites and email mailing lists for the networks in each of the various research areas.

A key factor for the success of the networks is the publication of the research articles produced by the working groups at the conference. In order to publish the research, typically the group has to continue working together for a few months after the conference, and this fosters the creation of strong connections among collaborators. The AWM will continue to publish the Proceedings from the conferences in its new AWM-Springer Series.

MathFest! The Centennial of the MAA was celebrated in grand style in Washington DC in August. The AWM was well represented at the birthday party and presented a gift to MAA President Francis Su: a custom-made copper sculpture in the form of a Möbius strip, to symbolize the ongoing partnership and unending friendship between AWM and MAA. The AWM-MAA Falconer Lecture was delivered to a packed audience by **Erica Walker**, who has recently agreed to join the AWM Education Committee. Welcome, Erica!

The AWM activities at MathFest were organized by our MathFest Committee, a subcommittee of the Meetings Portfolio: **Alissa Crans**, **Jacqueline Jensen-Vallin**, and **Maura Mast**. They organized a very interesting paper session, "The Contributions of Women to Mathematics: 100 Years and Counting," to celebrate and recognize a century of great mathematical achievements by women, with talks about mathematics done by women and historical and biographical presentations celebrating women in mathematics. They also organized a poster session showcasing the fantastic work being done by AWM Student Chapters to support women and girls in mathematics around the country. While in Washington DC for MathFest, AWM launched a new initiative to engage with government representatives on matters affecting women and girls in science by visiting Capitol Hill. A group of students from the AWM Student Chapters joined AWM leadership for one day of visits to congressional offices on the Hill to argue on behalf of STEM education bills with an emphasis on funding diversity initiatives. See the write-up on page 19 of this issue.

AWM President Kristin Lauter, AWM Executive Director Magnhild Lien, and MAA President Francis Su

AWM-MAA Falconer Lecturer Erica Walker and AWM President Kristin Lauter

Awards: AWM is delighted to announce the winners of the 2016 Hay and Humphreys Awards. **Judy Walker** has been selected to receive the 2016 Louise Hay Award for Contributions to Mathematics Education. Judy is the Aaron Douglas Professor of Mathematics and Chair of the Department of Mathematics at the University of Nebraska–Lincoln. The winner of the 2016 M. Gweneth Humphreys Award for Mentorship of Undergraduate Women in Mathematics is **Naomi Jochnowitz** of the Department of Mathematics at

continued on page 6

the University of Rochester. Congratulations to both winners! These awards will be presented at the Joint Prize Session of the Joint Math Meetings in January 2016 in Seattle. Please see the detailed press releases on pages 17 and 18 of this issue.

New Advisory Board members: We are pleased to announce two new members of the AWM Advisory Board: **Mark Green**, Professor Emeritus at UCLA, and former AWM President **Carolyn Gordon**, Professor at Dartmouth College.

New corporate sponsor: AWM has a new Executive Corporate Sponsor, **Expii!** (https://www.expii.com/). Expii provides a platform for sharing a collection of free, interactive explanations of math and science written by people from around the world. **Po-Shen Loh**, the founder of the start-up company, is a professor of mathematics at Carnegie Mellon and the national coach of the USA International Math Olympiad team. Expii will be supporting AWM Student Chapters and helping to set up shared resources for the chapters.

NSF grants: Although we are very grateful that we will be able to support the participation of many women in math in our AWM-sponsored workshops and conferences through the ADVANCE grant, still too few NSF research dollars go to supporting women's research in math overall. The fact remains that you cannot get a grant unless you apply for it. Unfortunately the competitive grant-writing cycle can be discouraging and exhausting, and too few women apply for support for their research careers. At the AWM Research Symposium in April, we encouraged all participants to apply for NSF grants to support their research. Plenary speaker **Katrin Wehrheim** pointed everyone to her webpage *Tips for writing a research proposal* (http://www-math.mit.edu/~katrin/slides/writingproposal.pdf), slides from an MIT grant writing workshop. Next spring there will be an innovative four-day workshop, re:boot 2016, to help mentor women in a focused research area to apply for NSF and NSA grants to support their research. Every participant will be required to submit a grant proposal as an outcome of the workshop! See the write-up by **Alina Bucur** in this issue of the newsletter.

Facebook news! In a series of almost daily posts on the AWM Facebook page, Executive Committee member **Marie Vitulli** has been providing stimulating topics for discussion, interspersed with biographies of women in math and updates on the activities of AWM and women in the profession. Follow us on Facebook and Twitter to get the most up-to-date news on AWM. We have more than 3600 Likes on Facebook ☺! The AWM Student Chapters also have their own Facebook page with updates on their activities.

Finally, don't forget to renew your membership if you have not already done so, and to vote in the AWM election!

Best wishes,

Kristin Lauter

Kristin Lauter
September 24, 2015
La Jolla, CA

Kristin Lauter

AWM Ballot

You will receive an email 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, 2015**. You must validate a mail ballot by signing your name on the envelope, or your vote will not be counted.

President-Elect (vote for one):

❏ Ami Radunskaya ❏ _____

Treasurer (vote for one):

❏ Ellen Kirkman ❏ _____

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

❏ Minerva Cordero ❏ Laura DeMarco

❏ Raegan Higgins ❏ Gail Letzter

❏ Fengyan Li ❏ Ivelisse Rubio

❏ Talithia Williams ❏ Carol Woodward

❏ _____ ❏ _____

❏ _____ ❏ _____

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, 2016.

You will receive an email inviting you to vote on or about November 16, 2015. 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 6 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, affiliate, and corporate memberships do not carry voting privileges. Electronic ballots must be cast by **December 15, 2015**, which is also the due date for paper ballots.

PRESIDENT-ELECT

Ami Radunskaya, Pomona College

Ami Radunskaya

Statement: The AWM has been a source of support and inspiration for me since my undergraduate days at Berkeley. I am honored to be nominated as President, and I am grateful for this opportunity to give back to the Association and its members. We need to continue to support women: young, maturing and matured, through the challenges that we face as professional mathematicians. Our community will benefit from the recruitment and retention of talented young women who dream of doing mathematics for a living, and we can all serve as role models for girls who don't realize that they can turn their enjoyment of puzzles and numbers into a career. The AWM has developed many successful programs to address these needs, and I hope to work with the AWM management, staff and many dedicated volunteers to ensure the continued health of these programs, as well as collaborating with all of you to develop and implement new ones.

I see that success in mathematics manifests itself in many ways: in research achievements, in being an inspiration and mentor to students of mathematics, in finding solutions to problems that we face as a society, in changing policies to ensure access to the math path for everyone, in experiencing the beauty of mathematics and the joy of doing it. One of my goals as AWM President is to build community between all types of mathematicians by supporting a unified network of members, and by paying attention to the needs of all our members.

The gateway to mathematics takes on many forms, some more welcoming than others. My own mathematical trajectory has been non-standard: I took a ten-year detour between high school and college while I explored some of this world's possibilities. I depended on the good will and support of many people as I went through school and began my career. Aspiring mathematicians don't all have equal access to research opportunities, graduate school, internships, postdocs, jobs and recognition. As AWM President, I will work within our association and with other groups to facilitate access to opportunities in mathematics. I hope that we can use our collective strength to build and support a diverse mathematical community.

I admire the creative ideas and the immense amount of work that the AWM leadership has done to make the Association what it is today. I will do my best to uphold the standards set by those before me, and to look forward to anticipate the needs of our future members.

Biographical information: A California native, Professor Radunskaya received her BA from UC Berkeley after ten "gap" years playing the 'cello and composing in the Bay Area. She went on to get a PhD in mathematics from

continued on page 8

Stanford University, and then was a postdoc at Rice University for three years. She has been a faculty member of the Department of Mathematics at Pomona College in Claremont, California for the last 20 years, specializing in ergodic theory, dynamical systems, and applications to various "real-world" problems. Some current research projects involve mathematical models of cancer immunotherapy, designing strategies for delivery of drugs to the brain, modeling the fate of blood clots and the effect of anti-coagulants, and studying stochastic dynamical systems. Professor Radunskaya believes strongly in the power of collaboration and that everyone can learn to enjoy mathematics. She is a co-director of the EDGE (Enhancing Diversity in Graduate Education) program, which won a Mathematics Programs that Make a Difference Award from the American Mathematics Society in 2007. She is the editor of a recently released Springer volume *Applications of Dynamical Systems in Biology and Medicine* which features 9 papers by 53 women authors, the output of the first WhAM! (Women in Applied Mathematics) workshop hosted by the IMA. Radunskaya was awarded an Irvine Fellowship for Excellence in Faculty Mentoring in 2004, she delivered the Falconer Lecture at MathFest in 2010, she received a Wig Award for Excellence in Teaching in 2012, and she was featured in the 2014 documentary *The Empowerment Project.*

TREASURER

Ellen Kirkman, Wake Forest University

Ellen Kirkman

Statement: I am honored to be nominated for a second term as the AWM Treasurer. The AWM has played an important role in helping women enjoy successful careers in the mathematical sciences, and our AWM leadership has developed several exciting new initiatives to provide further opportunities for women. With its rather small paid staff the AWM is heavily dependent upon volunteers, and with rather small financial resources it is important that AWM have a solid financial plan. Over the past four years we have established a Finance Committee, which has recommended several initiatives to improve our financial position, and we hope to make further improvements in the future.

For forty-four 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 BA at the College of Wooster, Wooster, Ohio in 1970 and her PhD in mathematics and MA in statistics from Michigan State University in 1975. Her professional activities include serving on the AMS Nominations Committee 2009–2011, as an MAA Governor 2006–2008, on the Joint Data Committee of AMS-ASA-MAA-IMS-SIAM (2000–-2007 and 2009–present), directing the CBMS 2010 and 2015 surveys 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. She is a Fellow of the AMS.

MEMBER-AT-LARGE

Minerva Cordero, University of Texas at Arlington

Statement: I am honored to be nominated for Member–at-Large of the AWM Executive Committee, a committee whose members are remarkable and dedicated individuals committed to advocate for women in mathematics. Actually I am beyond honored; I am very excited to be able to serve the AWM in this capacity! The AWM has been a champion for women in mathematics for over forty years and has had a tremendous impact in the mathematical community. I have been a member for many years and have personally benefited from many of the programs the AWM sponsors. Advocating for women's issues is at the heart of what I do every day and I would be delighted to contribute to the organization that is a leader in supporting women in mathematics. As we all know, while we have come a long way we still have a long way to go. As I was reflecting on my own journey in mathematics I realized that the percentage of PhDs granted to women in the US who are US citizens has remained constant at 24% since I graduated in 1989. Moreover the number of US women of color receiving PhDs in mathematics has remained at about 20 per year since the 1980s, yielding 1.2% in 1988–1989 and 0.59% in 2012–2013 of the total PhDs awarded in those years. Given the demographic changes in our country it is even more important for organizations like the AWM to continue to lead the effort to increase the participation of women in mathematics. I am confident that together we can change the face of mathematics!

Minerva Cordero

Biographical information: Minerva Cordero received degrees in mathematics from the University of Puerto Rico (BS), the University of California at Berkeley (MS) and The University of Iowa (PhD). She conducts research in the areas of finite geometries and combinatorics. Her research has been supported by the National Science Foundation, the National Security Agency, and others. She has given numerous talks at several national and international conferences. Dr. Cordero is a very dedicated teacher. She received several awards for her outstanding teaching including the prestigious University of Texas System Regents Outstanding Teaching Award and the Texas Section Award for Distinguished College or University Teaching of Mathematics. Cordero is concerned with diversity in the sciences at all levels of academia. During the last five years she received generous funding from the National Science Foundation to support her work with the Arlington Independent School District schools with the largest percentage of underrepresented minorities. Nationally she served as Governor-at-Large for Minority Interests for the Mathematical Association of America (MAA), was Chair of the MAA Committee for Minority Participation in Mathematics, and served as Chair of the Human Resource Advisory Committee of the Mathematical Sciences Research Institute (MSRI) at UC Berkeley. As Associate Dean for Academic and Faculty Affairs in the College of Science, Cordero oversees all matters pertaining to undergraduate programs and faculty development and promotion in the College of Science at UT Arlington.

Laura DeMarco, Northwestern University

Statement: The AWM plays an important role in the mathematical community, advocating for women at all levels. In my personal experience, I have seen need for support for women faculty at research universities, and I am aware that similar needs are felt throughout the discipline. I don't have precise numbers, but word-of-mouth indicates that percentages of women students at the top research departments are dropping. I would like to work with the AWM to address the present-day concerns.

continued on page 10

Laura DeMarco

I have participated in AWM chapters and special events for women in mathematics since I was a graduate student. I currently benefit from the Women In Mathematics meetings that take place at my university. Most of all, I have benefited from the discussions, involving both men and women, initiated by various women-in-math programs, covering all aspects of our career: finding jobs, succeeding in our jobs, juggling work and family life, travel, grants, service to the mathematical community, and day-to-day atmosphere.

Biographical information: Laura DeMarco is Professor of Mathematics at Northwestern University. Before arriving at Northwestern in 2014, she held positions at the University of Illinois at Chicago and at the University of Chicago. She received her PhD in 2002 from Harvard University under the direction of Curtis McMullen. DeMarco's current research is in the areas of complex dynamical systems and arithmetic geometry. She is the recipient of a Simons Foundation Fellowship (2015–2016), a Sloan Foundation Fellowship (2008–2010) and the NSF CAREER Award (2008–2013).

DeMarco is currently on the AWM Noether Lecture selection committee, and she has served on several committees for the AMS. She is on the editorial boards of *Journal of Modern Dynamics* and *AMS Conformal Geometry and Dynamics*. She has supervised the work of seven PhD students and five postdocs since 2010.

Raegan Higgins, Texas Tech University

Statement: I am excited about my nomination for Member-at-Large of the AWM Executive Committee. Throughout my life, I have been fortunate to receive a lot of support and encouragement in my pursuit to become a mathematician. While most of my mathematics mentors and role models have been men, my very first was a woman. Her love and passion for the field opened my eyes as an eighth grader to an area that "girls can't do." If elected, I am looking forward to contributing to the future of the AWM as it continues to become more responsive and helpful to women mathematicians at all stages of their education and professional lives. Although some may think programs exclusively for women are no longer needed, I know from my own experiences and interactions with female graduate and undergraduate students and colleagues, this is not yet true. I am happy and dedicated to contribute to the work of the

Raegan Higgins

AWM as it continues to have a positive impact on the mathematics community.

Since the start of my graduate career, I have been actively involved with programs supporting women and underrepresented minorities in mathematics. I participated in the Enhancing Diversity in Graduate Education (EDGE) program as student and later as instructor in 2014 and 2015. I served on the organizing committee for the Nebraska Conference for Undergraduate Women in Mathematics for several years as a graduate student and returned as invited guest in 2014. In addition, I served as a graduate student mentor for Nebraska IMMERSE (Intensive Mathematics: a Mentoring, Education and Research Summer Experience). In 2012, I served on the steering committee for the Infinite Possibilities Conference, a national meeting designed to promote, educate, encourage and support minority women interested in mathematics and statistics. Having been mentored both formally and informally throughout my career, I feel it necessary to share my experiences with mathematicians, especially women, hoping to make their journey smoother.

Biographical information: Raegan Higgins is an assistant professor in the Mathematics and Statistics Department at Texas Tech University. Her research focuses on oscillation criteria of dynamic equations on time scales. Raegan, a Project NExT Fellow, teaches undergraduate and graduate courses to both traditional and nontraditional students, including middle and high school educators. She is also a co-founder of Young Women in Mathematics, a student organization at Texas Tech that provides space for open discussion about and growth in the mathematical sciences for the female students in her department. For the past six years, Raegan served on the Emmy Noether High

continued on page 12

CALL FOR NOMINATIONS

2017 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 PhD 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; and 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, 2016** 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.

School Mathematics Day at Texas Tech. She has organized an AMS Special Session and is currently serving as the chair of the SIAM Workshop Celebrating Diversity (WCD) Working Group. Raegan earned a BS in mathematics from Xavier University of Louisiana in 2002 and an MS and PhD in mathematics from the University of Nebraska-Lincoln in 2004 and 2008, respectively.

Gail Letzter, National Security Agency

Statement: When examining my tenure package years ago, the Virginia Tech College of Science promotion committee asked for additional information about my "unusual academic trajectory." Like many of my female colleagues, I have faced special challenges and enjoyed special opportunities. With nearly thirty years passing since I finished my PhD in mathematics, I feel very strongly that it is time to give back to my professional community. This past year, I took my first formal volunteer role with AWM as one of the co-organizers for our Biennial Research Symposium. Among my responsibilities, I co-organized an innovative special session that brought together speakers from government labs and multiple government agencies. Currently, I am the managing editor for the associated *Springer Proceedings* volume.

I am very honored to be nominated as a Member-at-Large of the Executive Committee of the AWM. This

Gail Letzter

organization can play a significant role as a "big tent" for a community of mathematicians from both the academic and non-academic worlds. If elected, I hope to integrate more women in government and industry into thriving AWM programs (that have so successfully touched the lives of academic women), as featured lecturers, speakers in sponsored

CALL FOR NOMINATIONS

2017 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, 2016** 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.

special sessions, and panelists. By building on individual connections, I plan to strengthen relationships with industry and government on a larger scale with the goal of expanding AWM institutional members and corporate sponsors. I view this as an important step towards finding more stable sources of revenue for our many wonderful ambitious programs. I would also encourage more opportunities for junior colleagues to explore career options, work-life balance, environmental complexities, and other professional issues with senior women representing a broad spectrum of experiences. When problems arise, I want female mathematicians to know that they can turn to the AWM by speaking informally to individual AWM leaders, taking advantage of AWM's established mentoring programs, and easily tapping into resources that we make accessible in a welcoming fashion.

Biographical information: Gail Letzter received her BA from Harvard University and her PhD in mathematics from the University of Chicago. Her first academic appointment was at Wayne State University (1987–1993), where she was awarded tenure and a National Science Foundation Postdoctoral Fellowship served at MIT. Letzter worked for one year as a Cryptologic Mathematician at NSA in an effort to solve a two-body-plus-epsilon problem. She restarted her academic career at Virginia Tech in 1996, rising through the ranks to full professor. In addition to being awarded seven research grants from NSA, NSF, and the U.S. Israel Binational Science Foundation, the conference "Special Lie Day" at the University of Amsterdam was arranged in her honor (2005). While a faculty member, Letzter maintained her ties to the classified mathematics community as a consultant and in 2006 took a full-time position as an applied research mathematician at NSA. Letzter was promoted in 2014 to NSA's Senior Executive Service (Defense Intelligence Senior Level) and today coordinates technical projects in their Mathematics Research Group. She is active in NSA's Women in Mathematics Society, responsible for a range of mentoring initiatives.

Letzter is recognized for contributions to the representation theory of quantum groups. She is credited with the now standard Hopf algebraic approach to quantum symmetric pairs. While employed by the government, Letzter filled a four-year term as the Lie algebra editor for the *Proceedings of the AMS*. She continues to give invited lectures at academic conferences and has been selected to participate in the upcoming collaborative WINART (Women in Noncommutative Algebra and Representation Theory) conference, to be held in Banff.

Fengyan Li

Fengyan Li, Rensselaer Polytechnic Institute

Statement: I wasn't consciously aware of the different experiences for women and men at schools or at work until I came to the United States for my doctoral study in 2000. It was then I was introduced to AWM. Like many others, my research and career has benefited from the support of AWM through travel grants, mentoring and AWM workshops. As I understand more the challenges women could have professionally, and appreciate more the importance of an organization like AWM to the community, I have become more involved with AWM events. In 2013, I co-organized a special session at the AWM Research Symposium in Santa Clara; in 2014, I served as a panelist at the AWM workshop in Chicago; and in 2015, I served on the SIAM Committee of AWM and co-organized the AWM workshop in Salt Lake City. I have also been serving as a mentor through the AWM Mentor Network.

In addition to contributing to established AWM programs, I have played leadership roles in two more recent endeavors. One is a WhAM! program sponsored by IMA, where, over the last year, I mentored and led a women's research team consisting of one associate (myself) and two assistant professors, one postdoc and one graduate student. The other is a mini-symposium I co-organized at ICIAM, an international conference held in Beijing this August, to

continued on page 14

network women researchers in applied mathematics. Both technical and career sessions of this mini-symposium involved women applied mathematicians from different countries at different career stages. I would like to continue promoting the idea and creating opportunities for women researchers to work with each other internationally across various research areas and career stages. This not only helps us thrive scientifically and professionally while building a natural advising and supporting network, it also broadens the impact of AWM to other scientific communities, especially in some countries where such organizations do not exist.

Biographical information: Fengyan Li is an associate professor of applied mathematics at Rensselaer Polytechnic Institute (RPI). She received her BS and MS degrees in computational mathematics from Peking University in 1997 and 2000, respectively, and her PhD degree in applied mathematics from Brown University in 2004. Before she joined RPI in 2006, she held a postdoc position at University of South Carolina. Fengyan's research interests and activities are mainly in numerical analysis and scientific computing. Her research particularly focuses on the design, analysis and applications of accurate and robust numerical methods for partial differential equations, with applications in such fields as electromagnetism, fluid dynamics, astrophysics, and plasma physics. Fengyan received a Stella Dafermos Award at Brown University in 2004 and was a recipient of an Alfred P. Sloan Research Fellowship in 2008. In 2009, she was granted an NSF CAREER award for her research in high order methods and their applications. Fengyan has recently presented an invited talk at the workshop "Women in Applied Maths & Soft Matter Physics" held in Germany this October and a plenary address at the Annual Conference of Computational Mathematics in China this September.

Fengyan has supervised three doctoral students, all of whom took on postdoc positions after graduation, and mentored one postdoc who is now an assistant professor in China. She has hosted two visiting female students and advised many undergraduate research projects. She was a member of the organizing committee of the SIAM Annual Meeting in 2014, a co-organizer of an IMA special workshop WhAM! A Research Collaboration Workshop for Women in Applied Mathematics, and served on the SIAM Committee of AWM to co-organize the 2015 AWM Workshop. Fengyan is currently serving on the editorial boards of the *SIAM Journal on Scientific Computing and Applied Mathematics and Mechanics* (English Edition).

Ivelisse Rubio

Ivelisse Rubio, University of Puerto Rico, Rio Piedras

Statement: It is an honor to be considered to serve as a Member-at-Large of the AWM Executive Committee. Over the years I have worked on issues and projects related to diversity in mathematics, in particular providing opportunities to undergraduate students from underrepresented groups to help them continue and succeed in graduate studies in mathematics. By serving on the AWM Travel Grant Selection Committee I got to know about many women doing excellent research in mathematics who probably would not be able to present their research without the help of the AWM.

I hope that my experience co-directing the SIMU and MSRI-UP REUs, my work on several committees and my organizational experience will help me to contribute to the AWM efforts to offer opportunities and encourage women to pursue careers in mathematics.

Biographical information: Ivelisse Rubio is a faculty member of the Computer Science Department of University of Puerto Rico, Río Piedras and has a PhD in applied mathematics from Cornell University. Her research interests are in the area of finite fields and their applications. She has directed undergraduate research projects in computational mathematics of numerous minority students and has been involved in many activities to promote undergraduate research in mathematics. She co-founded and co-directed the REU Summer Institute in Mathematics for Undergraduates (SIMU) (1998–2002) and the REU MSRI-UP (2007–

2015). In 2006 SIMU received the American Mathematical Society's award for Programs That Make a Difference, the first time that this award was given by the AMS. For her work related to the mathematics activities at SACNAS conference she and Ricardo Cortez received a 2006 SACNAS Presidential Service Award. In 2010 she received the Dr. Etta Z. Falconer Award for Mentoring and Commitment to Diversity. She is currently a member of the US National Committee for Mathematics and of the American Mathematical Monthly Editorial Board.

Talithia Williams

Talithia Williams, Harvey Mudd College

Statement: I remember the first time I met a woman with a PhD in math. I was at Spelman College and had come to campus during the summer of 1996 for a summer science program. Dr. Etta Falconer, who directed the program at the time, was a shining example of everything I could one day become. Her presence was warm and witty, like your favorite grandmother who might give you a dollar and tell you not to spend it all in one place. She had a way of making us fall in love with math. As a student at Spelman, I later realized that there were fewer than 100 African American women with PhDs in math and that given the rate at which we were getting math PhD degrees, if I decided to go to graduate school, I, too, could be in the top 100. I can remember how frustrated I felt when I heard that statistic. Fortunately, I channeled those emotions into the driving force that led me to likewise earn a PhD.

Since then, I have been active in organizations that seek to broaden the participation of women in mathematics. I have coordinated the EDGE (Enhancing Diversity in Graduate Education) summer program for women and currently serve on the board of the Sylvia Bozeman and Rhonda Hughes EDGE Foundation, a nonprofit organization that trains and mentors women for success in graduate school in the mathematical sciences. I am active on the Board of Governors for the MAA as the Governor for Minority Interests and on the board of SACNAS, an organization dedicated to the success of Hispanic, Chicano and Native Americans in science. I would be delighted to serve as a Member-at-Large on the AWM Executive Committee and further our mission of motivating, cultivating and promoting mathematical talent in women and girls.

Biographical information: Dr. Talithia Williams is an associate professor of mathematics at Harvey Mudd College. In her present capacity as a faculty member, she exemplifies the role of teacher and scholar through outstanding research, with a passion for integrating and motivating the educational process with real world statistical applications. Her educational background includes a bachelor's degree in mathematics (Spelman College), master's degrees in both mathematics (Howard University) and statistics (Rice University), and a PhD in statistics (Rice University). Her professional experiences include research appointments at the Jet Propulsion Laboratory (JPL), the National Security Agency (NSA), and NASA. Williams develops statistical models which emphasize the spatial and temporal structure of data with environmental applications. She has been recognized for the development of a cataract model used to predict the cataract surgical rate for countries in Africa. She recently gave a TED talk (currently over 1 million views) titled "Own Your Body's Data," which explores how each of us can begin to collect data about ourselves that can provide insight into our personal health. She is also active in her faith community, serving as a Trustee on the Pomona First Baptist Board of Trustees and with her husband as a Christian marriage mentor couple. She's the exhausted mom of three amazing boys, ages 3, 5, and 7 (triple prime!!!).

continued on page 16

Carol Woodward

Carol Woodward, Lawrence Livermore National Laboratory

Statement: AWM has been and continues to be a strong professional resource and advocate for Women in the Mathematical Sciences. AWM travel grants have been instrumental in helping young professionals in mathematics establish and solidify research directions, and the AWM-sponsored awards are critical in showcasing achievements of senior women mathematicians. I would consider it an honor to serve this organization through participating on the AWM Executive Committee as a Member-at-Large. Through my service on the AWM-SIAM Workshop Committee I've seen how effective the AWM is in helping junior members of our profession build their careers. My goals include helping AWM continue its workshops and its other many effective programs. My goals also include advocating for and supporting women mathematicians in industry and government labs. I think AWM could play a vital role in helping young women to see the exciting roles that mathematicians play in industry and at government labs. In addition, I think AWM could help to provide opportunities for non-academic senior women to get recognition for their work. I would like to develop awards for women mathematicians in industry and labs and work to involve more nonacademic women in AWM-sponsored events, helping to facilitate the transfer of progress in theoretical areas to applied problems and the needs of applied problems to those working in pure areas. I think AWM is a natural place for women mathematicians to build their networks across employment sectors.

Biographical information: Dr. Carol Woodward has been a computational mathematician in the Center for Applied Scientific Computing (CASC) at Lawrence Livermore National Laboratory (LLNL) since June of 1996. Prior to that time, she attended Rice University where she received her PhD and Louisiana State University where she graduated with a BS in mathematics. She completed high school at the Louisiana School for Math, Science and Arts, a two-year residential high school that emphasizes advanced study in mathematics, sciences, humanities, and arts.

Carol Woodward serves as co-chair for the Joint Committee on Women in the Mathematical Sciences. She has served AWM as a member of the AWM-SIAM workshop committee and has participated in many AWM workshops as both a mentor and mentee. She served as Numerical Methods Group Leader and Postdoctoral Program Manager in CASC. She is a member of the Society of Industrial and Applied Mathematics (SIAM) Council and Chair of the SIAM Activity Group on the Geosciences. She has also held offices in the SIAM activity group on Computational Science and Engineering. Woodward serves on the editorial boards for *SIAM Journal on Scientific Computing, Advances in Water Resources*, and *ACM Transactions on Mathematical Software* and has served on numerous organizing committees for national and international meetings. Her research interests include numerical methods for nonlinear partial differential equations, nonlinear and linear solvers, time integration methods, verification of scientific codes, and parallel computing.

Judy Walker Honored with Hay Award

The Association for Women in Mathematics will present the twenty-sixth annual Louise Hay Award to **Judy Walker** at the Joint Mathematics Meetings in Seattle, WA in January 2016. Walker is Aaron Douglas Professor and Chair of the Department of Mathematics at the University of Nebraska–Lincoln (UNL). Established in 1991, the Hay Award recognizes outstanding achievements in any area of mathematics education. Louise Hay was widely recognized for her contributions to mathematical logic, for her strong leadership as Head of the Department of Mathematics, Statistics, and Computer Science at the University of Illinois at Chicago, for her devotion to students, and for her lifelong commitment to nurturing the talent of young women and men. 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.

Walker received her BS in Mathematics from the University of Michigan and her PhD from the University of Illinois at Urbana-Champaign under the direction of Nigel Boston.

The Hay Award is presented to Walker in recognition of her leadership and contributions as a mathematical scholar and educator. Creating and adapting innovative courses at all levels, Walker has made extraordinary contributions to mathematics education, guiding high school through graduate students, including freshmen and honors non-mathematics majors, as well as practicing teachers.

She has received numerous awards for her teaching excellence, including the Mathematical Association of America Deborah and Franklin Tepper Haimo Award for Distinguished College or University Teaching of Mathematics in 2006. In 2012 she was awarded the UNL Aaron Douglas Professorship for Teaching Excellence, a five-year renewable appointment given to faculty at the rank of full professor who demonstrate extraordinary levels of teaching excellence and national visibility for instructional activities.

Walker is a recognized role model committed to nurturing the talent of emerging scholars. Locally, graduate students in her department selected her for the Roger Wiegand Award. Nationally, Walker co-created the Nebraska Conference for Undergraduate Women in Mathematics, which advances over 250 undergraduate women each year. This conference was recognized in 2013 with the AMS Programs that Make a Difference Award. She also created a program to support the transition to graduate study for undergraduates from small institutions, and with a colleague established a mathematics summer camp for high school girls.

Judy Walker

A Fellow of the American Mathematical Society, Walker has published over thirty papers and organized eleven research conferences in algebraic coding theory, including six special sessions at AMS meetings. She is one of only four women chosen to present the George Pólya Lectures for the MAA.

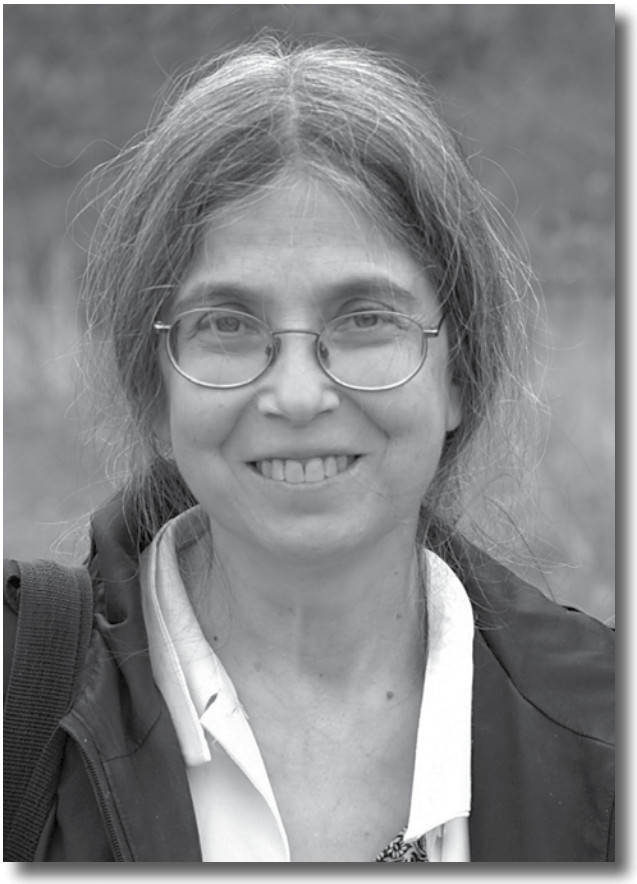
A mathematician and educator fully in the tradition of Louise Hay, Judy Walker is richly deserving of the 2016 Louise Hay Award.

The 2016 Joint Mathematics Meetings will be held January 6–9 in Seattle, WA. For further information on the Hay Award, including past winners, please visit www.awm-math.org.

Naomi Jochnowitz Honored with Humphreys Award

The Association for Women in Mathematics will present the sixth annual M. Gweneth Humphreys Award to **Naomi Jochnowitz** of the Department of Mathematics at the University of Rochester at the Joint Mathematics Meetings in Seattle, WA in January 2016. This 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 PhD 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.

Jochnowitz has been a teacher and mentor for over forty years, devoting herself to the development and support of undergraduate students of mathematics, in addition to her activities with math graduate students and postdocs, with a particular impact on scores of women students. "She offers very demanding courses with the explicit assumption that everyone can succeed and she will provide all the support necessary for that outcome." Student letters, even from students more than thirty years ago, still vividly and passionately recount their experiences: Jochnowitz's students embark on a "math[ematical] journey" together with her, where she "sets high standards, treating even her youngest students like respected colleagues." Her courses are challenging, with exams "notoriously long and difficult," but Jochnowitz is "fiercely devoted to teaching," not leaving evening office hours until everyone's questions have been answered, sometimes past midnight. She "pushes her students to think smarter and achieve more."



Naomi Jochnowitz

Jochnowitz is often cited as motivating young women to take challenging mathematics courses, directly confronting any insecurities or lack of confidence they may have. She encourages students to pursue summer opportunities and advanced degrees, checking in with them regularly after they graduate. Many former students work to emulate her passion for teaching and nurturing students. Dr. Jochnowitz cares deeply about her students, and she nurtures them "one student at a time."

The AWM is proud to honor Naomi Jochnowitz's outstanding achievements in inspiring undergraduate women to discover and pursue their passion for mathematics.

The 2016 Joint Mathematics Meetings will be held January 6–9 in Seattle, WA. For further information on the Humphreys Award, including past winners, please visit www.awm-math.org.

For the latest news, visit www.awm-math.org

AWM Student Chapters

AWM Goes to MathFest ... and Capitol Hill!

Victoria Kelley, James Madison University; Kirsten Morris, Georgia College; and Katie Sipes, James Madison University

This year's MathFest was a big celebration of the Mathematical Association of America centennial. It was held in the nation's capital. Undergraduate students affiliated with the Association for Women in Mathematics participated in a Poster Session highlighting events from AWM Student Chapters, and more!

The AWM Student Chapters Poster Session at MathFest showcased the AWM chapters from universities all over the United States. At this poster session, AWM members were able to share their experiences promoting the role of women in mathematics. The poster session was an excellent opportunity for fellow MathFest attendees to learn about AWM and see how several different institutions promote the mission of AWM. Just as importantly, the poster session was a time for AWM chapter members to meet each other, learn about AWM activities occurring at other universities like a 3.14-mile run for Pi Day, and share opportunities and resources for AWM chapter expansion and growth. Students from The University of Texas at Arlington, Georgia College and State University, James Madison University, Clemson University, Colorado School of Mines, and Clarkson University participated in this poster session. Chapter members were also able to meet executive leaders of AWM and gain ideas on how to promote the goals of AWM on the chapter level. After the poster session, Virginia Tech and James Madison University had a cooperative synergistic conversation over dinner. As a result of these members meeting at MathFest, Virginia Tech and James Madison University are planning to hold a joint event soon on graduate schools in mathematics.

Along with presenting in the poster session, two students from the James Madison University AWM Student Chapter gave individual talks on research they had done at their university. In addition to this opportunity to share events different chapters had done over the past year and present research, there was also a great opportunity to go to Capitol Hill with women from the AWM executive offices. Three different teams of professors and students from various states went on the daytrip. The participating students include **Julie Skinner Sutton** from the University of Texas at Arlington, **Kirsten Morris** from **Georgia College**, **Leah Granger** from Clarkson University, **Katie Sipes** from James Madison University, and **Victoria Kelley** from James Madison University. **Ruth Charney**, **Adriana Salerno**, **Sarah Greenwald**, **Kristin Lauter**, **Karen Saxe**, **Magnhild Lien**, and **Ami Radunskaya** led the three teams. In addition, **Rebecca Swanson** from the Colorado School of Mines accompanied one of the groups. These teams visited twenty-three different offices of members of Congress from nine states.

Gathering for the trip to the Hill

The AWM members asked the congressional members for support for the STEM Gateways Act and the STEM Opportunities Act of 2015. This was a very rewarding day since the students were able to make valuable connections with executive officers of AWM as well as with their Representatives and Senators. One of the students had a follow-up meeting with Congressman Honda's office a few weeks after the initial visits. The various AWM Student Chapters look forward to inviting members of Congress to their chapter events for the upcoming year. MathFest proved to have another successful year, with ideas shared and connections made, all in the name of Mathematics.

Israeli Conference and Student Chapter

*Arielle Leitner, Technion**

The first Israeli conference of women in mathematics was a huge success! It took place August 9–13 at Tel Aviv University and was organized by Professor **Shiri Artstein** and several graduate students at TAU.

The mini courses by Professors **Tamar Ziegler** (Hebrew University) on ergodic theory and combinatorial number

continued on page 20

theory and **Yael Algom-Kfir** (Haifa University) on geometric group theory (in particular, Culler-Vogtmann outer space) were very well received. Both Tamar and Yael gave practice problems, and practice sessions TA'd by graduate students provided a wonderful opportunity to learn the material in greater depth (and for the graduate students to practice teaching and presentation skills). Around 60 undergraduate and graduate students were engaged in the courses and in the practice sessions. Throughout the conference, the participants were very busy talking to each other about mathematics, but also about life as a female mathematician, gender inequity, and ways to improve for the future. There was a lot of networking, and next year, the conference will be in Jerusalem!

The young women here are also excited about starting an AWM student chapter and connecting to some of the

Participants in the first Israeli conference of women in mathematics

activities that are going on in the United States. There was much applause at the announcement that we now have a chapter for women in math in Israel, and we look forward to much collaboration together in the future.

On a personal level, I am deeply appreciative that I was a part of the conference. Everything was in Hebrew, but I managed to understand about 70–80% of what was going on, and I even managed to answer some math questions in Hebrew as a TA for Yael's course! I enjoyed meeting participants from a variety of backgrounds: women from many different universities, with and without children, religious and secular, Israeli Arabs and Israeli Jews. Everyone was extremely welcoming to me and wanted to get to know me, as much as all of the participants at the conference wanted to get to know each other. I look forward to my continued mathematical life in Israel.

*Leitner received her PhD in mathematics from the University of California, Santa Barbara in June 2015. She started as a postdoc at Technion–Israel Institute of Technology in September.

Child Care Grants for National Meetings

JMM 2016: The AMS and the MAA will provide approximately 50 reimbursement grants of US$250 per family to help with the cost of child care for a number of registered participants at 2016 JMM. The funds may be used for child care that frees a parent to participate more fully in the JMM. Registration for the meeting as a participant is required to apply for this program. Applications will be accepted on a first-come first-served basis until November 18, 2014. Final decisions on recipients will be made on or before November 25, 2014.

SIAM 2016: SIAM is offering up to $250 per family for attendees who bring children to the 2016 SIAM Annual Meeting in Boston, MA , in July 2016. Information about how to apply will be posted in January 2016.

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.

Math Talent in *The Mysteries of Laura*

Sarah J. Greenwald

The Mysteries of Laura will begin its second season soon on NBC [1]. Main character Laura Diamond is acknowledged as the best detective on the force, by far. A few shows have investigated her lack of science and math talent as well as the talent of others around her.

We first see this theme in the episode "The Mystery of the Frozen Foodie" (original airdate 1/7/15). Max Carnegie, the precinct's intern, tells Laura "Look here—I found an odd little pattern." Max noticed an extra $500 going into an account that is related to a case, and he begins to explain the simple arithmetic to Laura. However, Laura cuts him off and says "Stop. I don't do math." Aside from perhaps Max, math talent is portrayed as an innate ability on the show. In an interview about his character [2], actor Max Jenkins (who plays Max) notes that the writers originally "pictured someone who was really good at math, smart and kind of geeky. I don't know if the character I have created is necessarily that smart. I think he just works really hard." While we haven't yet seen Max working that hard on math, the language the writers chose in this episode about the pattern recognition does indicate a level of effort going into the discovery. Contrast that with the portrayal of geniuses in the episode "The Mystery of the Intoxicated Intern" (original airdate 03/25/15). The character Linda has a PhD from Yale and works for Palster, which connects people based on compatibility ratings, and she explains to Laura: "Palster uses a bipartite graph-matching algorithm to pair users with platonic acquaintances." Laura tells detective Meredith Bose that "any one of these little geniuses could be our perp." Innate math talent has been portrayed as relatively gender neutral on the show. Both male and female geniuses work at Palster for example, although it is the men who run the company.

continued on page 22

CALL FOR NOMINATIONS

The 2017 AWM – Joan & Joseph Birman Research Prize in Topology and Geometry

The Executive Committee of the Association for Women in Mathematics has established the AWM – Joan & Joseph Birman Research Prize in Topology and Geometry. First presented in 2015, the prize will be awarded every other year. The purpose of the award is to highlight exceptional research in topology/geometry by a woman early in her career. The field will be broadly interpreted to include topology, geometry, geometric group theory and related areas. Candidates should be women, based at US institutions who are within 10 years of receiving their PhD, or have not yet received tenure, at nomination deadline.

The AWM – Joan & Joseph Birman Research Prize in Topology and Geometry serves to highlight to the community outstanding contributions by women in the field and to advance the careers of the prize recipients. The award is made possible by a generous contribution from Joan Birman who works in low dimensional topology and her husband Joseph Birman who is a theoretical physicist.

The nomination should include: 1) a one to three page letter of nomination highlighting the exceptional contributions of the candidate; 2) a curriculum vitae of the candidate not to exceed three pages; and 3) three letters supporting the nomination (submitted independently). Nomination materials should be submitted online at MathPrograms.org.

The submission link will be available 45 days prior to the nomination deadline. Review of candidates will begin in mid-February. For full consideration, nominations should be submitted by **February 15, 2016**. If you have any questions, phone 703-934-0613 or email awm@awm-math.org.

The writers revisit the theme of STEM talent later in the season in back-to-back episodes. In the first episode, Laura's partner Billy Soto is surprised that Laura recognizes the chemical element symbol Au as standing for gold in "The Mystery of the Crooked Clubber" (original airdate 05/06/15) because he thought she had failed chemistry. He asks her about this and she says she learned it from *The New York Times* crossword puzzle, which she does regularly. Laura may not be the only person on the show without math or science talent. In the succeeding episode, "The Mystery of the Deceased Documentarian" (original airdate 05/13/15), Laura hypothesizes that Thomas, the victim, might have been "bad at math" in another case related to simple arithmetic.

I think it is well past time that people stop viewing simple arithmetic as something to be good or bad at. Attributing basic proficiency in quantitative reasoning to those "others" who are good at math prevents people from trying, even when they seem perfectly capable of doing so, as in Laura's case. I agree with cognitive psychologist Daniel Willingham that "the vast majority of people are fully capable of learning K–12 mathematics" [3]. I'll be interested to see where the writers take this theme in season two, especially with Max.

References

[1] *The Mysteries of Laura*. http://www.nbc.com/the-mysteries-of-laura

[2] Starry Constellation Magazine. "Max Jenkins—The Mysteries of Laura." February 11, 2015. http://starrymag.com/?p=5436

[3] Willingham, Daniel T. "Ask the Cognitive Scientist: Is It True That Some People Just Can't Do Math?" *American Educator*. Winter 2009–2010, pp. 14–19 and 39. http://www.aft.org/sites/default/files/periodicals/willingham.pdf

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**.

BOOK REVIEW

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

The Goddess of Small Victories: a love story, Yannick Grannec, translated by Willard Wood. Other Press, 2014, ISBN-13: 978-15905 16362.

Reviewer: Judith Roitman, University of Kansas (emerita), roitman@ku.edu

The central character of the novel *The Goddess of Small Victories* is Adele Porkert Gödel, Kurt Gödel's wife. The central action consists of her reminiscences about her life, her husband, and his milieu. Since my research is fundamentally grounded in Gödel's incompleteness theorems, since I was at the Institute for Advanced Study (Gödel's professional home) the semester before he died, and since I am interested in both feminist and class issues (before marrying Kurt, Adele was a divorced nightclub dancer), I greatly looked forward to reading this book.[1]

Unfortunately I didn't like it. I had to force myself to finish it. Vienna did not come to life. Princeton did not come to life. Gödel did not come to life. Gödel's good friend Einstein did not come to life. Nor did any of the other historical characters (there are many) or the invented ones (many more). Even Adele herself did not come to life—a seriously lost opportunity given that she lived at the intersection of so many 20th century concerns: class, gender, exile.…

Perhaps if you read the book in French it will come to life. In English, no. The language is just too clunky. Here's an example, taken pretty much at random—you can find similar examples on every page:

> I was the eldest of three Porkert sisters, Liesl, Elizabeth, and Adele—a terrible trio! What a racket we made! My father called me his "stubborn little mule." [2]

Nothing is formally wrong with this. But try to say it out loud—it's not quite English. It just sits there on the page, half dead, dragging down all the sentences around it. If you want to read this book, read it in French.

That said, there is a bigger problem. The book cannot be trusted. The basic plot is built on a conceit that the author admits in an afterword is, in fact, false. The conceit is that Adele has to be convinced, almost tricked, into willing Gödel's papers to the Institute. The person delegated to do this is a young woman named Anna, and the book proceeds in chapters alternately about Anna (third person) and Adele (first person). But in fact not only was there no Anna, there was no need for one. No one had to convince Adele to will Gödel's papers to the Institute. She just did it.

Yes, this is a historical novel. Everyone understands that the little things in historical novels are inventions. But the big things aren't supposed to be. Credibility is central to a historical novel, but with a false conceit at the center of the character of the central character of the story, the book as a whole loses credibility, which is further undercut by the book's endnotes. [3]

For example, after trying to explain the continuum hypothesis (CH) to Adele, Gödel exclaims "I need to find out whether God created the whole numbers and man all the rest."[4] It would be fascinating if Gödel indeed thought that, but an endnote helpfully mentions that in fact it was Leopold Kronecker who said this. Kronecker not only was not Gödel, but he died in 1891, fifteen years before Gödel was born. To make things worse, Kronecker believed that mathematics could not speak about infinity, while in some sense Gödel's mathematics spoke of nothing else.[5] So this is like putting a quote of Arthur Laffer in Paul Krugman's mouth.

A different problem underlies Grannec's attempts to present the revolutionary science and mathematics her historical characters were involved in. In interviews (one of which appears as an afterword in the book) she is very sincere about wanting to elucidate them. But due to the book's structural form, the only way these ideas can come out is if Adele convinces someone to explain them to her. Consider, for example, the explication of CH, which takes place over

continued on page 24

[1] which has, in the original French version, won 10 literary awards: Prix des Libraires 2013, Prix Prince Pierre de Monaco de la bourse de la découverte, Finaliste du Prix du Roman Fnac, Prix du 1er roman du festival des mots Doubs, Prix des lectrices Edelweiss (Suisse), Prix Gaël (Belgique), Prix Bernard Palissy, Prix du 1er roman de Cosne-sur-Loire, PRIX des clubs de lecture de la Ville de Saint-Germain-en-Laye, Prix Cinélect 2013, Prix "Un livre Une commune" de Combs-la-ville

[2] p. 97

[3] whose purpose is, of course, to give credibility. I am grateful to the author for giving us clues to at least some of what is problematic.

[4] p. 176

[5] To her credit, Grannec mentions this in her footnote, making her narrative strategy even stranger.

many pages on a beach. Does the mathematics make sense to a non-mathematician? Yes. At least, it did to my non-mathematician husband. And as a scene in a novel? In any language, no. Adele strikes her breast. Kurt raises an eyebrow. Adele thinks of her childlessness. Kurt angrily tosses pebbles into the water. And so forth and so on. All while basic set theory is being explicated. It just doesn't make emotional sense.

In short, this book is disappointing. Until someone writes a better book about Kurt Gödel and his circle, the person who wants a sense of the social and intellectual milieu in which mathematical logic developed should read the graphic novel *Logicomix: An Epic Search for Truth* by Apostolos Doxiadis and Christos Papadimitriou.[6] As for the rich complex of other issues raised by the lives of Adele and Kurt Gödel—political, sociological, feminist, even, in the case of anorexic paranoid Kurt, psychological—these can be found in many, better books about other, different people.

[6] focused, one should note, on Bertrand Russell, not Gödel, but you take what you can get.

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.

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

EDUCATION COLUMN

Education Column Editor: Jackie Dewar, Loyola Marymount University, jdewar@lmu.edu.

A Well-Kept Secret: Women in Mathematics Education

Jackie Dewar, Professor Emerita of Mathematics, Loyola Marymount University, Los Angeles, CA

Mathematicians rarely get the kind of public recognition that other scientists do. Asking calculus students or future math teachers to write the names of as many mathematicians as they can in one minute, results in short lists with just a few of these names—Newton, Leibniz, l'Hôpital, Galileo, Euclid, Pythagoras—and often Einstein. Rarely does the name of a woman mathematician appear—unless the instructor is a woman and the students are trying to impress her. Given the general lack of knowledge about people, let alone women, who did mathematics, it is to be expected that women who were primarily mathematics educators would get no recognition.

This article, and the talk[1] it summarizes, are intended to celebrate the lives and accomplishments of three women who made their contributions to mathematics education during the second half of the 20th century: Ruth Afflack (California State University Long Beach), Natalie Ambrose (Immaculate Heart High School), and Teri Perl (The Learning Company). Each of these women authored books or educational materials (see references), co-founded one or more organizations, and had a significant impact on many (including me, who became good friends with all three of them through our interactions).

Authors of books and educational materials

Teri Perl

Teri Perl authored, co-authored, or co-edited four books and two papers. Teri's first book, *A Sourcebook for Substitute Teachers*, was a response to a real need—quality lessons for substitutes. As one user commented online, "I have been teaching for 19 years and STILL use this book! It was a Godsend when I was substitute teaching!!"[2]

Math Equals, her 1978 book, had a significant effect on me and the trajectory of my career. It not only inspired me to develop a course on women and mathematics but it showed me how I might be able to combine into a single course information about women, gender issues in mathematics, and mathematical activities.[3] After teaching and revising the course now and again for 30 years, I received three rounds of MAA-Tensor grant funding to mentor three junior colleagues in teaching it for an audience of future K–12 teachers and to disseminate course materials.[4] (Further references and additional information about the work and impact of each woman appear at the end of this article.)

Ruth Afflack

Ruth Afflack wrote *Beyond Equals*: *To encourage the participation of women in mathematics*, published by Math/Science Network in 1982. This book contains great activities for engaging people in mathematics, and doing so in a very supportive environment. Working to increase her students' confidence in their ability to do math was a hallmark of her teaching, whether it was future teachers, "re-entry" women—a term used in the 1980s to describe mature women returning to college after a long hiatus from school—or those in her weekend workshops on overcoming math anxiety. She had amazing ways of approaching key mathematical concepts such as functions, developing problem-solving skills, and encouraging risk-taking. Ruth helped me start my own Overcoming Math Anxiety workshop at Loyola Marymount University (LMU). Many of her ideas and problem solving exercises have been incorporated into the problem-solving portion of a course for beginning math majors that has been taught for 25 years at LMU.

Natalie Ambrose

While Natalie Ambrose did not publish any books or articles, she gave many workshops, talks and inservice training sessions. Whether she was teaching a class, or an inservice,

continued on page 26

[1] This article summarizes a talk I gave with the same title in the AWM-sponsored Themed Contributed Paper Session at 2015 MathFest: The Contributions of Women to Mathematics: 100 Years and Counting.

[2] http://www.barnesandnoble.com/w/sourcebook-for-substitutes-and-other-teachers-dale-seymour-publications-secondary/1112582269

[3] Dewar, J. (1991). Mathematics: Contributions by Women. *Journal of Humanistic Mathematics* (formerly *Humanistic Mathematics Network Journal/Newsletter*), 6.

[4] http://myweb.lmu.edu/jdewar/wam/

or a conference workshop, everything was "hands on and minds on." In fact, just about all the photos available of her through Immaculate Heart High School show evidence of this. She attributes her approach to teaching math to the education that she received at Hunter College in the 1940s (personal interview, June 7, 2015). She shared her ideas and materials widely. They are referenced on the Corita Kent Art Center website and in lessons that others published.

Co-founders and agents of change

Teri Perl

Teri Perl co-founded both a non-profit organization (Math/Science Network in 1974) and an educational software company (The Learning Company in 1980).

Math/Science Network, the group that originated the Expanding Your Horizons (EYH) career days, is now known as Expanding Your Horizons Network, of which Teri is a past president. It serves as a clearinghouse for 80 or so EYH career days for junior and senior high girls each year across the US and in Europe and Asia. According to the EYH website (http://www.eyhn.org/), total attendance at EYH career days is approaching 1 million girls.

The Learning Company began "when there were no big-name educational software companies—just beginning programmers and educators looking to make a difference."[5] It went on to produce cutting-edge educational software for young children, including Gertrude's Secrets, Gertrude's Puzzles, Reader Rabbit, Math Rabbit, and Rocky's Boots. Teri was responsible for writing the users'/teachers' guides to accompany these programs. Anyone reading this who has children in their 30s, as I do, may have purchased some of these programs for them, as I did. The company continues as part of Houghton-Mifflin-Harcourt.

Ruth Afflack

Ruth Afflack founded not one but two non-profit organizations (Math/Science Interchange, 1978 and The Peter Carr Peace Center, 1981). Math/Science Interchange, begun by Ruth and three other college math professors, was an outgrowth of regional meetings and activities of the Association for Women in Mathematics in the Los Angeles area. The word "interchange" in its name is an inside reference to freeway interchanges, befitting Math/Science Interchange's location in Los Angeles. This all-volunteer organization continues to work to increase the participation of women in all fields related to math and science. Without any paid staff ever, it has organized an Expanding Your Horizons Career day for girls every year since its founding (http://www.expandingyour horizonsla.org/).

Ruth was among the network of faculty, students, staff, and community members who shared values of peace, social justice and environmental sanity and founded the Peter Carr Peace Center, now called the Center for Peace and Social Justice, at California State University, Long Beach (CSULB). According to the website (http://web.csulb.edu/~scrass/cpsj/), its activities have included: establishing the Peace Studies Program, resisting ROTC and the militarization of campus, organizing the campus opposition to the first Gulf War, and opposing the commercial development of a piece of CSULB land that was once the site of a Native American village.

Ruth died in 2008 but her generosity and commitment to the environment live on through her bequest of 10 acres of land to the PCC Farmland Trust. The Trust's mission is to secure and preserve threatened farmland in the Northwest, so that future generations of local farmers can continue to farm it. Ruth's bequest led to the establishment of the Ruth Afflack Stewardship Fund (http://www.pccfarmlandtrust.org/trust-celebrates-bequest-with-stewardship-fund/).

Natalie Ambrose, IHC

Natalie Ambrose was a member of a very traditional religious order of nuns, the Sisters of the Immaculate Heart of Mary. In response to the second Vatican Council's call for renewal, in the mid-1960s this order of nuns began to modernize their dress, to relax their strict rules about what to do at what time (literally, when to pray as a group, when to turn lights out, and so on), and to choose more active ministries. The sisters soon encountered difficulties with church officials and eventually the only "solution" open to them was to start a new and independent religious community, the Immaculate Heart Community (IHC). In 1970 Natalie joined with 450 of the nuns to start IHC. According to its website (https://www.immaculateheartcommunity.org/), IHC is an inclusive, ecumenical "community without walls" made up of women and men, single and married

[5] https://www.questia.com/magazine/1G1-58615570/a-company-is-born

without regard to sexual orientation, and from several Christian denominations. Natalie served as the vice president of the community in the late 1980s. Today the community runs an all girls' high school and the Corita Art Center, both in Los Angeles, and a retreat center in Santa Barbara, and does other forms of outreach.

Closing thoughts

As their accomplishments demonstrate, Natalie, Ruth, and Teri were activists for significant causes both in and outside of mathematics. To the best of my knowledge, none of these women published any traditional mathematical research. But they certainly did make a difference through their various contributions to mathematics education. All were pioneers, leaders, and mentors to many, including me.

Acknowledgements: I want to thank Natalie Ambrose, Fran Manion, Teri Perl, Catherine Smith, Lindsay Tartre, Carla Trujillo, and Mary Fay-Zenk for providing or helping me gather information for this article.

References and additional information:

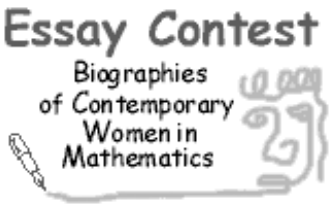
Ruth Afflack

Beyond Equals: To encourage the participation of women in mathematics. Math/Science Network, 1982.

Mathophobia: A Mini-Course for the Mathophobic. In J. E. Jacobs (ed.), *Perspectives on Women and Mathematics*. Columbus, OH: ERIC, pp. 73ff, 1978.

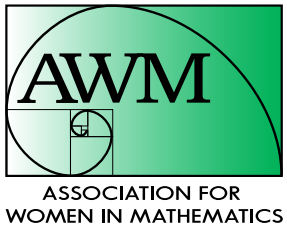
Ruth Afflack is acknowledged and/or thanked in *Introduction to Abstract Algebra* by J. T. Moore (Academic Press, 1975) for suggesting many improvements at the manuscript stage, in *Ms. Magazine (*1976) for her work to help women overcome math anxiety, in *Complexities: Women in Mathematics* by Betty Anne Case and Anne M. Leggett (Princeton University Press, 2007) for organizing AWM meetings regionally in the early years (~1978) of AWM, in *Managing the Mean Math Blues*, 2nd ed, by Cheryl Ooten (Pearson, 2010) for allowing use of her ideas, and by the PCC Farmland Trust

continued on page 28



To increase awareness of women's ongoing contributions to the mathematical sciences, the Association for Women in Mathematics holds an annual essay contest for biographies of contemporary women mathematicians and statisticians in academic, industrial, and government careers. AWM is pleased to announce that the 2016 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 hlewis5@naz.edu or see the contest web page: www.awmmath.org/biographies/contest.html. The deadline for electronic receipt of entries is **January 31, 2016**. *(To volunteer as an interview subject, contact Heather Lewis at the email address given.)*



(http://www.pccfarmlandtrust.org/) for her bequest of 10 acres, which led to the establishment of the Ruth Afflack Stewardship Fund.

Natalie Ambrose

Natalie Ambrose's teaching materials are referenced on the Corita Kent Art Center website (http://www.corita.org/educationteachertraining.html) and in lessons published by other teachers, such as "Octagon Star Activity" by Jerry Neidenbach in the CMC (*California Math Council) ComMuniCator*, 17(2), p. 42, 1992. Her reflections on the "Creative Process" and ways to help students experience the infinite, the infinitesimal, and the interrelation between the two are posted at http://myweb.lmu.edu/jdewar/nambrose.

Teri Perl

A sourcebook for substitutes and other teachers, by Miriam Freedman and Teri Perl. Dale Seymour Press, 1974.

Math Equals: Biographies of Women Mathematicians + Related Activities. Addison-Wesley, 1978. (This book inspired my course on women and mathematics, see http://myweb.lmu.edu/jdewar/wam)

Women and Numbers: Lives of Women Mathematicians plus Discovery Activities. Wide World Publishing/Tetra, 1993.

Notable Women in Mathematics: A Biographical Dictionary, edited by Charlene Morrow and Teri Perl. Greenwood Press, 1998.

The Ladies' Diary … Circa 1700. *Mathematics Teacher* 70(4), pp. 354–358, 1977.

The Ladies' Diary or Woman's Almanack, 1704–1841. *Historia Mathematica* 6, pp. 36–53, 1979.

Discriminating Factors and Sex Differences in Electing Mathematics. *Journal for Research in Mathematics Education*, 13(1), pp. 66-74, 1982.

Teri Perl received the 2005 WAVE (Women of Achievement, Vision and Excellence) award from GirlSource (https://www.youtube.com/watch?v=ZBV8oX4WcKY) and her contributions to Math/Science Network were acknowledged at the 30th annual celebration (http://www.cs.cmu.edu/~lblum/EYH/30thAnniversaryCelebration.pdf)

African Women in Mathematics Association (AWMA)

Marie Françoise Ouedraogo, omfrancoise@yahoo.fr

The African Women in Mathematics Association (AWMA) organized a workshop July 16–18, 2015 at Naivasha in Kenya. This workshop, on the theme "Women in Mathematics for Social Change and Sustainable Livelihoods," gathered 43 participants coming from various African countries and also France.

This workshop was a follow-up to a series of workshops jointly organized by AMUCWMA (African Mathematical Union Commission on Women in Mathematics in Africa) and CIMPA (International Centre for Pure and Applied Mathematics). The first was held in Ouagadougou Burkina Faso, October 26–27, 2012, and the second at the African Institute of Mathematical Sciences (AIMS), Cape Town South Africa, July 17–19, 2013.

AWMA's first General Assembly was held during the Naivasha workshop. The aims were multiple: to adopt the report of activities of the period 2013/2015, to adopt the logo of AWMA and to approve the new website of AWMA. Now, AWMA has a logo designed by Milaine Sergine Seuneu Tchamga, the Publicist Secretary of AWMA, and a website located at http://africanwomeninmath.org/. This website is financed by the IMU's Committee for Women Mathematicians (see below) and was created by a specialist web designer who also designed the EWM (European Women in Mathematics) website. On it one can find the reports of past workshops, the constitution of AWMA, and other information on African women mathematicians.

The creation of AWMA was first discussed at the workshop of Ouagadougou in 2012. This came to fruition at the workshop held at AIMS, Cape Town where the AWMA Constitution with twenty articles was formed and adopted during a round table.

Since mathematics is considered to be the mother of all science and technology, the main aim of AWMA is to bring together women from various countries within the African continent to give them a platform for presenting their work, to discuss the situation and status of women in mathematics in each of their countries, and to update the data on African women in the mathematical sciences. In order to contribute to increasing the skills of the human capital capacity of the African continent it is critical to realize the importance of promoting mathematics amongst the African population. However the number of mathematicians in Africa is small, moreover the proportion of women among them is extremely low. For this reason AWMA was formed to contribute to the development of mathematics and women in mathematics.

The main tool for implementing the Association's statutory goals is the general meeting. Thus AWMA has a general meeting at least once every two years. The general assembly is held during the general meeting.

The Officers of the Association are the President, five Regional Vice Presidents (one from each region of Africa), the Secretary, the Vice Secretary, the Treasurer and the Publicity and Information Officer. The Officers of the Association are elected at the General Meeting by a secret ballot. They take office for four years. A member may be eligible for another term of office but no member may serve at the same post for more than two consecutive terms. The standing committee is composed of the Officers.

Since its founding, AWMA has been involved in various activities:

1. Participation in the EWM general meeting: AWMA was invited to participate in the 16th general meeting of EWM which took place September 2–6, 2013, in Bonn, Germany. AWMA representatives at this congress were Joséphine Guidy-Wandja, Vice President for Western Africa and Yirgalem Tsegaye, Vice President for the Eastern region.

2. Participation in ICWM: AWMA was invited to participate in ICWM 2014 (International Congress of Women Mathematicians), held August 12–14, 2014 in Seoul, South Korea. The president of AWMA was a member of the ICWM forum which took place during the panel session "Mathematics and Women: Different Regions, Similar Struggles." The panel had eight participants from all parts of the world. More than twelve members of AWMA attended the ICM (International Congress of Mathematicians), thanks to NANUM TOGETHER, the grant proposed by South Korea which enabled 1000 participants from developing countries to attend the ICM.

3. CWM group: In order to prepare and organize ICWM 2014, a committee WiM: Women in Mathematics was created by IMU (International Mathematical Union). This committee created webpages http://www.mathunion.org/cwm/home/ whose aims are to promote women mathematicians and to coordinate associations of women mathematicians internationally under the auspices of the IMU. After ICWM 2014, IMU EC established a Committee for Women in Mathematics (see the Terms of Reference of IMU CWM on the above website). The president of AWMA is a member of CWM.

The establishment of AWMA has led to the creation of women in mathematics associations in several countries:

- Association des Jeunes Femmes en Mathématiques (AJFM): December 2013
- Nigerian Women in Mathematics (NWM): July 2014
- Kenyan Women in Mathematical Sciences (KWIMSA): November 2014
- Association of Congolese Women in Mathematics and Computer Science (AFCMC): December 2014
- Tunisian Women Mathematician's Association (TWMA): 2015

Here is the standing committee of AWMA from 2013 to 2017:

President: Marie Françoise Ouedraogo (Burkina Faso)
Vice President — West Africa: Joséphine Guidy-Wandja (Côte d'Ivoire)
Vice President — Central Africa: Rebecca Walo Omana (DR Congo)
Vice President — North Africa: Schehrazad Selmane (Algeria)
Vice President — East Africa: Yirgalem Tsegaye (Ethiopia)
Vice President — Southern Africa: Sibusiso Moyo (South Africa)
Secretary: Senelani Dorothy Hove-Musekwa (Zimbabwe)
Vice Secretary: Winifred Nduku Mutuku (South Africa/Kenya)
Treasurer: Faguèye Ndiaye-Sylla (Senegal)
Publicist Secretary: Milaine Sergine Seuneu Tchamga (South Africa/Cameroon)

For more information about AWMA, see our website or contact Marie Françoise Ouedraogo (omfrancoise@yahoo.fr).

Girls Just Want to Have Fun(ding)

Alina Bucur, University of California, San Diego

Are you a researcher in number theory? Do you have lots of ideas for research but haven't thought recently about how they all fit together? Or do you feel your research well is running dry? Do you want to put the power of peer pressure to work in your favor? Then re:boot may be for you!

re:boot is a four-day intensive "boot camp" for women in number theory that will take place March 17–20, 2016 at Duke University. We anticipate welcoming about two dozen researchers to this program. Our days at this unusual event will be focused on developing detailed long-term research trajectories. Our activities will not include standard research talks, but will instead be organized around (a) focused discussions on current developments in areas of number theory, (b) time periods spent on specific writing "assignments" meant to help solidify research plans, (c) vertically integrated mentoring with other women in number theory, (d) Q&A sessions with mathematicians who have significant experience with grant evaluation at both the NSF and the NSA, and (e) opportunities to get feedback from peers and to gain new mentors.

Why did we think of organizing re:boot? We are hoping to stimulate wide-spread participation of number theorists in the US funding system, and in particular to address some of the factors which have kept the number of NSF-funded female mathematicians stubbornly small. By encouraging effective vertical networking, we hope to provide researchers from all kinds of institutions with the preparation needed to prepare a solid grant application. We also hope to encourage participants to use the grant preparation process as a means of sharpening their research plans. Participants who are planning to submit a grant for the first time will gain valuable information on the nitty-gritties, and participants who have already submitted grants will have a chance for feedback from many alternative perspectives on their previous applications as well as works in progress.

Participants in re:boot will commit to submitting a proposal for one of the following grants in 2016: NSF Algebra & Number Theory, NSF CAREER, NSA-MSP Young Investigator, NSA-MSP Standard Grant (if available). We will encourage participants to take the focused writing and discussion periods we will provide as an opportunity to "re:boot" their own research by clarifying their goals, reflecting on their achievements, generating new ideas for future work, meeting potential collaborators, and coming up with ways to promote their work to their advisors, mentors, and colleagues.

The organizers of re:boot are Alina Bucur (UCSD), Heekyoung Hahn (Duke), Pirita Paajanen (Norwich), Lillian Pierce (Duke), and Caroline Turnage-Butterbaugh (Duke). Guest speakers will include former NSF program officer Loredana Lanzani (Syracuse), AWM President Kristin Lauter (Microsoft), and NSA Mathematical Sciences director Charles Toll.

The application process is still open, but will close soon. For more information, see the re:boot web site: http://www.math.duke.edu/~pierce/Reboot2016.shtml.

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The Institute for Computational and Experimental Research in Mathematics

SPRING SEMESTER 2017

Singularities and Waves in Incompressible Fluids
January 30 – May 5, 2017

Organizing Committee:
Bernard Deconinck, *University of Washington*
Yan Guo, *Brown University*
Diane Henderson, *Pennsylvania State University*
Helena Nussenzveig Lopes, *Federal University of Rio de Janeiro*
Govind Menon, *Brown University*
Paul Milewski, *University of Bath*
Walter Strauss, *Brown University*
Jon Wilkening, *University of California - Berkeley*

Program Description:
Incompressible fluids are an abundant source of mathematical and practical problems. The question of global-in-time regularity versus finite-time singularity formation for incompressible fluids, governed by the Navier-Stokes or Euler equations, has been one of the most challenging outstanding problems in applied PDE. There have also been new developments in the study of the onset of turbulence due to linear and nonlinear instabilities in incompressible fluids. Interfacial and surface water waves are physical phenomena that, in addition to the challenges outlined above, involve the evolution of free boundaries. These problems embody many of the mathematical challenges found in studies of nonlinear PDEs.

In this program, we provide a venue for interaction among researchers engaged in various problem-solving techniques to focus on topics arising in incompressible fluids.

More details can be found at:
http://icerm.brown.edu

Please visit our website for full program details:
http://icerm.brown.edu
121 S. Main Street • Providence, RI 02903
401-863-5030 • info@icerm.brown.edu

Association for Symbolic Logic
ASL Travel Awards

Student Travel Awards: The 2016 ASL North American Annual Meeting, 2016 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 2016 ASL North American Annual Meeting in Storrs, Connecticut or the 2016 ASL European Summer Meeting in Leeds, 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. See below for information about these 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 is supported by a grant from the US National Science Foundation; 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 in accordance with the Fly America Act. Application by email is encouraged; put "ASL travel application" in the subject line of your message.

For the 2016 ASL North American Annual Meeting, applications and recommendations should be received before the deadline of March 11, 2016, by the Program Chair: Patricia Blanchette, Department of Philosophy, 100 Malloy Hall, University of Notre Dame, Notre Dame, IN 46556 USA; Fax: 574-631-0588; email: **Patricia.Blanchette.1@nd.edu**. Applications by email are preferred.

For the 2016 ASL European Summer Meeting, applications and recommendations should be received before the deadline of May 2, 2016, by the Organizing Committee: Logic Colloquium 2016, School of Mathematics, University of Leeds, Leeds LS2 9JT, United Kingdom; email: **lc2016@leeds.ac.uk**. For applications by email, please put "ASL travel application" in the subject line of your message. Applications by email are preferred.

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 start of 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**.

FACULTY POSITION IN MATHEMATICS
University of California, Davis

The Department of Mathematics at the University of California, Davis invites applications for an Assistant Professor (tenure-track) faculty position starting July 1, 2016.

Candidates in all areas of mathematics will be considered. Priority will be given to outstanding candidates working in the areas of algebraic geometry, number theory, optimization, partial differential equations, probability, or scientific computation.

Minimum qualifications for the position include a Ph.D. degree or its equivalent in the Mathematical Sciences and excellent potential for performance in teaching and research. Duties include mathematical research, undergraduate and graduate teaching, and departmental, university and professional service.

Additional information about the Department may be found at https://www.math.ucdavis.edu/.

Applications will be accepted until the position is filled. For full consideration, completed applications should be received by November 30, 2015. To apply: submit the AMS Cover Sheet and supporting documentation electronically through http://www.mathjobs.org/.

The University of California, Davis, is an affirmative action/equal opportunity employer with a strong institutional commitment to the achievement of diversity among its faculty and staff.

ARTHUR J. KRENER ASSISTANT PROFESSOR POSITIONS IN MATHEMATICS

The Department of Mathematics at the University of California, Davis is soliciting applications for one or more Arthur J. Krener Assistant Professor positions starting July 1, 2016.

The Department seeks applicants with excellent reserach potential in areas of faculty interest and effective teaching skills. Applicants are required to have completed their Ph.D. by the time of their appointment, but no earlier than July 1, 2012. The annual salary is $61,100. The teaching load is 3 to 4 quarter-long courses. Krener appointments are renewable for a total of up to three years, upon demonstration of satisfactory performance in research and teaching.

Additional information about the Department may be found at https://www.math.ucdavis.edu/.

Applications will be accepted until the position is filled. For guarantee full consideration, the application should be received by November 30, 2015. To apply: submit the AMS Cover Sheet and supporting documentation electronically through http://www.mathjobs.org/.

The University of California, Davis, is an affirmative action/equal opportunity employer with a strong institutional commitment to the achievement of diversity among its faculty and staff.

PRINCETON UNIVERSITY

FACULTY POSITIONS IN MATHEMATICS

The Princeton University Mathematics Department expects to offer several junior faculty positions and postdoctoral appointments for the 2016—2017 academic year:

Instructorship: 1-year positions; normally renewed for 1-2 additional years. Ph.D. required.

Veblen Research Instructorships: 3-year positions (offered jointly by the Princeton University Mathematics Department and the School of Mathematics at the Institute for Advanced Study) for outstanding new Ph.D.'s. Typically, the first and third years of these appointments are spent teaching and conducting research at Princeton University and the second year is spent conducting research (without teaching duties) at the Institute for Advanced Study. (Please see the advertisement under THE INSTITUTE FOR ADVANCED STUDY for additional details about the Veblen Research positions.)

Assistant Professorships: 3-year renewable appointments; teaching experience preferred. Ph.D. required.

Postdoctoral Research Associate: one-year positions for recent Ph.D. recipients who wish to carry out research in mathematics with a Princeton faculty member, with possibility of renewal subject to continued funding and satisfactory performance.

Please note: Applicants will automatically be considered for all open junior faculty positions and postdoctoral appointments.

All applications should be submitted via MathJobs at http://www.mathjobs.org. For inquiries, please e-mail: application@math.princeton.edu. DEADLINE FOR APPLICATIONS: December 1, 2015.

These positions are subject to the University's background check policy.

Princeton University is an equal opportunity employer and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability status, protected veteran status, or any other characteristic protected by law.

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CORNELL UNIVERSITY—HC Wang Assistant Professor—The Department of Mathematics at Cornell University invites applications for two H.C. Wang Assistant Professor, non-tenure track, non-renewable, 3-year position beginning July 1, 2016. Successful candidates are expected to pursue independent research at Cornell and teach three courses per year. A PhD in mathematics is required.

The Department actively encourages applications from women and minority candidates. Applicants must apply electronically at http://www.mathjobs.org. For information about our positions and application instructions, see: http://www.math.cornell.edu/Positions/positions.html. Applicants will be automatically considered for all eligible positions. **Deadline: December 1, 2015**.

Early applications will be regarded favorably. Diversity and Inclusion are a part of Cornell University's heritage. We're an employer and educator recognized for valuing AA/EEO, Protected Veterans, and Individuals with Disabilities. We actively encourage applications of women, persons of color, and persons with disabilities.

ENHANCING DIVERSITY IN GRADUATE EDUCATION—Going to graduate school? Think "EDGE" (Enhancing Diversity in Graduate Education)The goal of the EDGE program is to strengthen the ability of women students to successfully complete PhD programs in the mathematical sciences, with particular inclusion of women from underrepresented groups. The 2016 EDGE Summer Session will be held June 6 – July 2 at Purdue University, West Lafayette, IN. The summer session provides two core workshops in analysis and algebra/linear algebra, as well as a shorter workshop in a vital area of mathematical research. EDGE also promotes networking and community through collaborative problem solving and by including facilitators from institutions across the country, speakers from academia and industry, and peer mentors. A follow-up mentoring program and support network is established with each participants' graduate program. Applicants to the program should be women who are either graduating seniors who have applied to PhD programs in the mathematical sciences or recent recipients of undergraduate degrees who are now entering Ph.D. programs. All applicants should have completed standard undergraduate courses in analysis and abstract algebra; final acceptance into the program is contingent upon acceptance to a PhD program in the mathematical sciences. Participants are provided travel, room and board, and a stipend. For application materials and additional details, visit http://www.edgeforwomen.org/ The deadline for applications is **February 29, 2016**.

GEORGIA TECH—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, and especially those from groups underrepresented in the mathematical sciences, are particularly encouraged. See www.math.gatech.edu/resources/employment for more details and application instructions.

INSTITUTE FOR DEFENSE ANALYSES—The Institute for Defense Analyses Center for Communications Research—Princeton (IDA/CCR-P) is looking for individuals in mathematics, computer science, electrical engineering, and related fields to join in exciting research that enhances our nation's security along with our sponsor, the National Security Agency. Individuals that thrive here enjoy solving difficult problems with a wide range of tools, from mathematics, statistics, computational science, and engineering. Rather than recruiting specific specialties, we are looking for smart PhDs who are willing to learn whatever it takes to solve our ever evolving research problems. Some problems require very deep and sophisticated mathematics, others the latest computational and other technologies, and many problems require both. Ours is a superior professional working environment emphasizing cooperative effort. We are located in Princeton, NJ and benefit from the exciting intellectual environment of our immediate area, as well as the benefits of being close to both New York and Philadelphia. U.S. citizenship and a Department of Defense TS//SI clearance (with polygraph) are required. IDA/CCR-P will sponsor this clearance for those selected. IDA/CCR-Princeton is an equal opportunity employer committed to providing a working environment that is free from discrimination on the basis of race, color, religion, sex (including pregnancy and gender identity), sexual orientation, national origin, age, disability, status as a protected veteran, marital status, genetic characteristic or any other legally protected condition or characteristic. Interested individuals should contact Dr. David J. Saltman (Director) at saltman@idaccr.org with a C.V. and a list of references.

IOWA STATE UNIVERSITY—The Department of Mathematics invites applications for the position of Assistant Professor with research expertise in mathematical bioinformatics and computational biology beginning August 16, 2016. In addition to an active research program, the candidate will be responsible for teaching courses at both the undergraduate and graduate level. The successful candidate will have a strong research portfolio in mathematical biology with an emphasis in bioinformatics, the potential to obtain external funding, and excellent credentials in both undergraduate- and graduate-level teaching. To guarantee full consideration, applications must be completed by **November 21, 2015**. For further information about the position, please visit our website at http://www.math.iastate.edu/jobs.html.

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 2016. 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, 2015** will be given priority. Johns Hopkins University is committed to active recruitment of a diverse faculty and student body. The University is an Affirmative Action/Equal Opportunity Employer of women, minorities, protected veterans and individuals with disabilities and encourages applications from these and other protected group members. Consistent with the University's goals of achieving excellence in all areas, we will assess the comprehensive qualifications of each applicant.

MATHEMATICAL BIOSCIENCES INSTITUTE (MBI) is accepting applications for Postdoctoral Fellows to start September 2016. MBI Postdoctoral Fellows engage in a two-year integrated program of tutorials, working seminars, workshops, and interactions with their mathematical and bioscience mentors. These activities are geared toward providing the tools to pursue an independent research program with an emphasis on collaborative research in the mathematical biosciences. MBI facilitated activities are tailored to the needs of each postdoctoral fellow. Applications for an MBI Postdoctoral Fellowship should be submitted https://www.mathjobs.org/jobs/mbi. Applications completed before **December 7, 2015** will receive full consideration. For additional information please contact Rebecca Martin (rebecca@mbi.osu.edu or 614-688-3519) or visit http://mbi.osu.edu/participate/postdoctoral-fellow/. MBI receives major funding from the National Sciences Foundation Division of Mathematical Sciences and is supported by The Ohio State University. Mathematical Biosciences Institute adheres to AA/EOE guidelines.

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MATHEMATICAL BIOSCIENCES INSTITUTE (MBI) is accepting applications for Early Career Awards for the 2016-2017 emphasis programs: Fall 2016 — Analysis of Complex Data in Biological Systems. Spring 2017 — Growth and Morphogenesis. Early Career Awards are aimed at non-tenured scientists who have continuing employment and who hold a doctorate in any of the mathematical, statistical, and computational sciences, or join any of the biological, medical, and related sciences. Applications for an Early Career Award completed before N**ovember 30, 2015** will receive full consideration. The applicant should state the period that he or she would like to be in residence. Applications for an Early Career Award should be submitted online at https://www.mathjobs.org/jobs/mbi For additional information please contact Rebecca Martin (rebecca@mbi.osu.edu or 614-688-3519) or visit http://mbi.osu.edu/participate/early-career-award/ MBI receives major funding from the National Sciences Foundation Division of Mathematical Sciences and is supported by The Ohio State University. Mathematical Biosciences Institute adheres to AA/EOE guidelines.

NORTHEASTERN UNIVERSITY—Department of Mathematics, Assistant/Associate Professor Tenure-Track Position—The Department of Mathematics at Northeastern University invites applications for a tenure-track position at the Assistant/Associate Professor level in Applied Mathematics to start as early as Fall of 2016. Appointments will be based on exceptional research contributions in Mathematics combined with a strong commitment and demonstrated success in teaching. Applications from those with an interest and ability to connect across units in the university to the advantage of research at the interface of mathematics and other disciplines are a top priority. Outstanding candidates with research in statistics, probability, discrete mathematics and computational mathematics are encouraged to apply. Candidates must have a Ph.D. in Mathematics or a related field by the start date, strong record of research, and demonstrated evidence of excellent teaching ability. Responsibilities will include teaching undergraduate and graduate courses, mentoring students and conducting an independent research program. Review of applications will begin immediately. Complete applications received by **November 15, 2015** will be guaranteed full consideration. Additional applications will be considered until the position is filled.

To apply, visit "Careers at Northeastern" at https://neu.peopleadmin.com. Click on "Full-time Faculty Positions" and search for the current position under the College of Science. You can also apply by visiting the College of Science website at http://www.northeastern.edu/cos and clicking on the "Faculty Positions" button. (Research statements, reference letters, and teaching statements can be submitted to MathJobs along with the other materials requested there for preliminary review by the Search Committee).Northeastern University is an Equal Opportunity, Affirmative Action Educational Institution and Employer, Title IX University. Northeastern University particularly welcomes applications from minorities, women and persons with disabilities. Northeastern University is an E-Verify Employer.

TEXAS A&M UNIVERSITY— The Department of Mathematics anticipates several openings for tenured, tenure-eligible, and visiting faculty positions beginning fall 2016. One position at the Assistant Professor level is in Nonlinear Partial Differential Equations and Applied Mathematics. For the others, the field is open. A Ph.D degree, research, and teaching are expected of all tenure- track positions. Salary and start-up funds are competitive. For an Assistant Professorship, we seek very strong potential in both research and teaching. Research productivity beyond the doctoral dissertation will normally be expected. For a tenured position, the applicant should have an outstanding research record, including success in attracting external funding, and demonstrated ability and interest to teach successfully. Informal inquiries are welcome. 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 finished their Ph.D. Preference will be given to candidates whose research interests are close to those of our regular faculty. A complete dossier should be received by **December 1, 2015**. Early applications are encouraged since the department will start the review process in early November, 2015. Applicants should send the completed "AMS Application Cover Sheet," a vita, statements on research and on teaching, and arrange to have letters of recommendation sent to: Mathjobs http://www.mathjobs.org. 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.

UNIVERSITY OF CALIFORNIA, SANTA BARBARA— FACULTY POSITION, DEPARTMENT OF MATHEMATICS— JOB #MATH14 TENURE— TRACK POSITION: The Department of Mathematics invites applications for a Tenure-Track Assistant Professor position in Differential Geometry. Candidate should strengthen and complement the research of the existing group in Geometry; interaction with other research groups is also encouraged. Demonstrated excellence in research and teaching are required. Candidates must possess a Ph.D. by September 2016. Appointments begin July 1, 2016. To apply for this position(s), applicants must submit a curriculum vitae, statement of research, statement of teaching philosophy & the American Mathematical Society cover sheet (available online at http://www.ams.org), & arrange for four letters of reference to be sent (at least one of which is directed towards teaching). Materials should be submitted electronically via http://www.mathjobs.org. Applications received on or before November 1, 2015 will be given full consideration. Questions can be emailed to recruitment@math.ucsb.edu The department is especially interested in candidates who can contribute to the diversity & excellence of the academic community through research, teaching and service. The University of California is an Equal Opportunity/Affirmative Action Employer and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability status, protected veteran status, or any other characteristic protected by law.

UNIVERSITY OF CALIFORNIA, SANTA BARBARA— Job #MATH15—Senate Lecturer Position in the Department of Mathematics—The Department of Mathematics at the University of California, Santa Barbara seeks applications for a Lecturer with Potential Security of Employment (similar to tenure-track), beginning July 1, 2016. Qualifications: Candidates must possess a Ph.D. in Mathematics or a closely related field. The successful applicant will be a broadly trained mathematician who is dedicated to undergraduate teaching and pedagogy in the context of a research university. Duties and Responsibilities: In addition to making significant contributions to lower-division teaching, the Lecturer PSOE will assist with curriculum development, advise undergraduate students and participate in service activities. Specific duties include the development and implementation of new courses and curricula at the undergraduate level and leadership roles in undergraduate activities and advising, in community outreach activities and in improving instructional resources. It is expected that the Lecturer PSOE will be involved in the submission of grants, attend relevant professional meetings, review programs, and mentor visiting and junior faculty. The Lecturer PSOE will interact directly with senior faculty, virtually all of who teach in the lower division on a regular basis. Further information about Mathematics at UCSB can be found at http://www.math.ucsb.edu. To apply for this position, applicants should submit a letter of interest outlining experiences and qualifications including teaching philosophy and mathematical interests and accomplishments together with a curriculum vita, and arrange for at least three letters of recommendation to be sent. Materials should be submitted electronically via http//www.mathjobs.org. Applications received on or before **January 1, 2016** will be given full consideration. For questions or additional information, please email, recruitment@math.ucsb.edu. The department is especially interested in candidates who can contribute to the diversity & excellence of the academic community through teaching and service. The University of California is an Equal Opportunity/Affirmative Action Employer and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability status, protected veteran status, or any other characteristic protected by law.

continued on page 36

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UNIVERSITY OF CONNECTICUT—Department of Mathematics—Assistant/Associate/Full Professor— Actuarial Science/Financial Mathematics— The Department of Mathematics at the University of Connecticut invites applications for a full-time, 9-month tenure-track faculty position at the rank of Assistant, Associate, or Full Professor in Actuarial Science and/or Financial Mathematics beginning in Fall 2016. UConn is entering a transformational period of growth supported by the $1.7B Next Generation Connecticut (http://nextgenct.uconn.edu/) and the $1B Bioscience Connecticut (http://biosciencect.uchc.edu/) investments and a bold new Academic Plan: Path to Excellence (http://issuu.com/uconnprovost/docs/academic-plan-single-hi-optimized_1). As part of these initiatives, UConn has hired more than 450 new faculty at all ranks during the past three years. We are pleased to continue these investments by inviting applications for an Assistant, Associate, or Full Professor in Actuarial Science and/or Financial Mathematics. The Department of Mathematics has 32 tenure/tenure track faculty members, 9 postdocs, 10 visiting assistant professors, 300 mathematics undergraduates plus more than 300 actuarial science undergraduates, 55 Ph.D. students (including 4 Actuarial Ph.D. students), 50 Actuarial Masters students, and 25 Applied Financial Mathematics Masters students. The Department has recognized research groups in Algebra/Number Theory, Analysis, Differential Geometry, Mathematics Education, Partial Differential Equations and Numerical Analysis, and Probability, and plans further to strengthen its Actuarial Science/Financial Mathematics group. Among its Actuarial Science/Financial Mathematics faculty members, it has 5 with PhDs, 4 with FSAs and 2 with ASAs. The Goldenson Center for Actuarial Research is housed in the department, within the actuarial program, which aims to create solutions to applied actuarial research problems. The actuarial program is designated a Center of Actuarial Excellence by the Society of Actuaries. The successful candidate will be expected to teach actuarial science and/or financial mathematics courses at all levels, to develop a vigorous externally funded research program and to generate productive collaborations with the insurance industry. The successful candidate will also be expected to broaden participation among members of underrepresented groups; demonstrate through their research, teaching, and/or public engagement the richness of diversity in the learning experience; integrate multicultural experiences into instructional methods and research tools, etc. The position is located at the Storrs campus. Minimum Qualifications: For the rank of Assistant Professor, a Ph.D. or an equivalent foreign degree in actuarial science, mathematics, statistics or a closely related area by August 22, 2016 and demonstrated evidence of excellent teaching ability and outstanding research potential in actuarial science and/or financial mathematics; for the senior ranks, in addition, an outstanding research record and program. Preferred Qualifications: Recognized research excellence in the search areas and the ability to contribute through research, teaching and/or public engagement to the diversity and excellence of the learning experience at UConn, and membership and/or progress toward Associateship/Fellowship in a recognized actuarial professional society.

Evaluation of applications will begin on **November 1, 2015** and will continue until the position is filled. Rank, salary, and appointment to either Actuarial Science and/or Financial Mathematics will be commensurate with qualifications and experience. To Apply: Submit a cover letter, curriculum vitae, teaching statement (including teaching philosophy, teaching experience, commitment to effective learning, concepts for new course development, etc.); research and scholarship statement (innovative concepts that will form the basis of academic career, experience in proposal development, mentorship of graduate students, etc.); commitment to diversity statement (including broadening participation, integrating multicultural experiences in instruction and research and pedagogical techniques to meet the needs of diverse learning styles, etc.); sample journal articles or books online at http://www.mathjobs.org/jobs, including at least four letters of reference, one of which addresses the applicant's teaching. Questions or requests for further information should be sent to the Hiring Committee at mathhiring@uconn.edu. Employment of the successful candidate will be contingent upon the successful completion of a pre-employment criminal background check. All employees are subject to adherence to the State Code of Ethics which may be found at http://www.ct.gov/ethics/site/default.asp. The University of Connecticut is committed to building and supporting a multicultural and diverse community of students, faculty and staff. The diversity of students, faculty and staff continues to increase, as does the number of honors students, valedictorians and salutatorians who consistently make UConn their top choice. More than 100 research centers and institutes serve the University's teaching, research, diversity, and outreach missions, leading to UConn's ranking as one of the nation's top research universities. UConn's faculty and staff are the critical link to fostering and expanding our vibrant, multicultural and diverse University community. As an Affirmative Action/Equal Employment Opportunity employer, UConn encourages applications from women, veterans, people with disabilities and members of traditionally underrepresented populations.

UNIVERSITY OF CONNECTICUT—Department of Mathematics—Assistant, Associate, Full Professor—The Department of Mathematics at the University of Connecticut, Storrs invites applications for multiple full-time, 9-month tenured or tenure-track faculty positions at the rank of Assistant, Associate, or Full Professor in Mathematics beginning in Fall 2016. We are seeking exceptionally well-qualified individuals with research interests in all areas of mathematics compatible with those in the department. The successful candidate will be expected to teach mathematics courses at all levels and to have a vigorous externally funded research program.

UConn has grown rapidly in the past decade to become one of the nation's Top 20 public universities, with an ambitious goal, at this transformational time in its history, to aspire to join the ranks of the greatest universities in the world. As one of the University's emphasized STEM programs, supported by the $1.7B Next Generation Connecticut (http://nextgenct.uconn.edu/) investment, the math department enjoys an active and dynamic academic environment. The department currently has 35 research faculty members with diverse research interests (including financial mathematics and actuarial science, algebra and number theory, combinatorics, analysis, applied math, geometry and topology, mathematical logic, math education, numerical analysis, partial differential equations, and probability) and a strong record of external funding. Faculty members in the department participate in a range of interdisciplinary projects with Physics, Philosophy, the Life Sciences, and Statistics, and with the Neag School of Education. The department will move into a new building in Fall 2016. Minimum Qualifications: A Ph.D. or an equivalent foreign degree in mathematics or a closely related area by August 22, 2016, demonstrated evidence of excellent teaching and outstanding research. Preferred Qualifications: An outstanding research program in an area that complements the research activity in the department. A record of attracting external funding and a commitment to effective teaching at the undergraduate and graduate levels. Evaluation of applications will begin on **November 20, 2015** and will continue until the positions are filled. Rank and salary will be commensurate with qualifications and experience. To apply, submit a cover letter, curriculum vita, teaching statement (including teaching philosophy, teaching experience, commitment to effective learning, concepts for new course development, etc.); research and scholarship statement (innovative concepts that will form the basis of academic career, experience in proposal development, mentorship of graduate students, etc.); commitment to diversity statement (including broadening participation, integrating multicultural experiences in instruction and research and pedagogical techniques to meet the needs of diverse learning styles, etc.); sample journal articles or books online at http://www.mathjobs.org/jobs, including at least three letters of reference, one of which addresses the applicant's teaching. Questions or requests for further information should be sent to the Hiring Committee at mathhiring@uconn.edu. Employment of the successful candidate will be contingent upon the successful completion of a pre-employment criminal background check. All employees are subject to adherence to the State Code of Ethics which may be found at http://www.ct.gov/ethics/site/default.asp. The University of Connecticut is committed to building and supporting a multicultural and diverse community of students, faculty and staff. The diversity of students, faculty and

staff continues to increase, as does the number of honors students, valedictorians and salutatorians who consistently make UConn their top choice. More than 100 research centers and institutes serve the University's teaching, research, diversity, and outreach missions, leading to UConn's ranking as one of the nation's top research universities. UConn's faculty and staff are the critical link to fostering and expanding our vibrant, multicultural and diverse University community. As an Affirmative Action/Equal Employment Opportunity employer, UConn encourages applications from women, veterans, people with disabilities and members of traditionally underrepresented populations.

UNIVERSITY OF OREGON—The University of Oregon department of mathematics seeks applicants for Postdoctoral Scholar specializing in number theory. This is a full-time position renewable for up to three years. Minimum qualifications for the postdoctoral positions are a PhD in mathematics, statistics, or closely related field; strong evidence of research potential in an area of active interest in the department; and evidence of teaching ability. Applicants should visit http://hr.uoregon.edu/jobs/ for a full position announcement and instructions on how to apply. First consideration will be given to applications received by December 1, 2015. The position will remain open until filled. Candidates should have the ability to work effectively with a diverse community. The University of Oregon is an EO/AA/Veterans/Disability institution committed to cultural diversity.

UNIVERSITY OF OREGON—The University of Oregon department of mathematics seeks applicants 2 Paul Olum Postdoctoral Scholars. These are full-time positions renewable for up to three years. Minimum qualifications for the postdoctoral positions are a PhD in mathematics, statistics, or closely related field; strong evidence of research potential in an area of active interest in the department; and evidence of teaching ability. Applicants should visit http://hr.uoregon.edu/jobs/ for a full position announcement and instructions on how to apply. First consideration will be given to applications received by **December 1, 2015**. The position will remain open until filled. Candidates should have the ability to work effectively with a diverse community. The University of Oregon is an EO/AA/Veterans/Disability institution committed to cultural diversity.

UNIVERSITY OF SOUTHERN CALIFORNIA—The Department of Mathematics in the Dana and David Dornsife College of Letters, Arts, and Sciences of the University of Southern California in Los Angeles, California, seeks to fill one tenure-track Assistant Professor position with an anticipated start date of August 2016.

The department is particularly interested in mathematicians specializing in the general areas of geometry and topology, but outstanding candidates in all areas of mathematics may also be considered. Candidates 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 numbers, preferably with the standardized AMS Cover Sheet. Candidates should also arrange for at least three letters of recommendation that address research, at least one of which also addresses teaching skills. Please submit applications electronically through MathJobs at http://www.mathjobs.org . 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: http://jobs.usc.edu/postings/52978. Review of applications will begin **October 15, 2015**. Additional information about the USC Dornsife's Department of Mathematics can be found at our web site http://dornsife.usc.edu/mathematics/. USC is an equal-opportunity educator and employer, proudly pluralistic and firmly committed to providing equal opportunity for outstanding persons of every race, gender, creed and background. The University particularly encourages women, members of underrepresented groups, veterans and individuals with disabilities to apply. USC will make reasonable accommodations for qualified individuals with known disabilities unless doing so would result in an undue hardship. Further information is available by contacting uschr@usc.edu.

WILLIAMS COLLEGE—The Department of Mathematics and Statistics invites applications for two tenure-track positions in statistics, beginning fall 2016, 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 are committed to working with an increasingly diverse student body. The candidates will become the fourth and fifth tenure-track statisticians in the department, joining a vibrant and active statistics group with a newly established statistics major. 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. The candidate should have a Ph.D. by the time of appointment. We welcome applications from members of groups traditionally underrepresented in the field. Candidates may apply via interfolio.com by uploading their vita and having three letters of recommendation on teaching and research uploaded to http://apply.interfolio.com/30206. 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. All offers of employment are contingent upon completion of a background check. Further information is available upon request. 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. The college has built its reputation on outstanding teaching and scholarship and on the academic excellence of its approximately 2,000 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.

WILLIAMS COLLEGE—The Williams College Department of Mathematics and Statistics invites applications for two full-time visiting positions in mathematics for the 2016-2017 year. The teaching load is four courses. Preference will be given to candidates who will have a Ph.D. in mathematics by September 2016. Applicants can apply electronically at http://mathjobs.org. Evaluations of applications will begin on or after November 15 and will continue until the position is filled. All offers of employment are contingent upon completion of a background check http://dean-faculty.williams.edu/prospective-faculty/background-check-policy. 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. The college has built its reputation on outstanding teaching and scholarship and on the academic excellence of its approximately 2,000 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.

continued on page 38

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YORK UNIVERSITY—Applications are invited for one tenure-track, alternate stream appointment at the Assistant Lecturer level in the Department of Mathematics and Statistics at York University to commence July 1, 2016. The successful candidate must have a PhD in the mathematical sciences, experience in curriculum development of undergraduate courses in mathematics or statistics, and provide evidence of excellence in classroom teaching. Knowledge of recent developments in mathematics pedagogy will be viewed as an asset. Applications must be received by **December 11, 2015**. Only applications received through the AMS MathJobs website, www.mathjobs.org, will be considered. Applicants will be asked to provide three signed letters of reference, a statement on teaching and a covering letter. Applicants may provide a teaching dossier but, if this is not possible, the covering letter should provide a very brief description of the teaching dossier. Those applicants invited to give interviews will be asked to present their teaching dossiers on the day of the interview. All York University positions are subject to budgetary approval. York University is an Affirmative Action (AA) employer and strongly values diversity, including gender and sexual diversity, within its community. The AA program, which applies to Aboriginal people, visible minorities, people with disabilities, and women, can be found at http://yorku.ca/acadjobs or by calling the AA office at 416-736-5713. All qualified candidates are encouraged to apply; however, Canadian citizens and Permanent Residents will be given priority. Applicants wishing to self identify can do so by downloading and completing the form found at: http://acadjobs.info.yorku.ca/files/2014/12/AA-Self-ID-Form-October-2013.pdf. Once this form has been signed it can be uploaded to MathJobs.

YORK UNIVERSITY—Applications are invited for one tenure-track appointment in Pure or Applied Mathematics at the Assistant Professor level in the Department of Mathematics and Statistics at York University to commence July 1, 2016. Applications in all areas of pure and applied mathematics will be considered. The successful candidate must have a PhD in Mathematics, a proven record of independent research excellence, and evidence of potential for superior teaching. The successful candidate will be expected to develop an excellent and innovative research program, secure and maintain external peer-reviewed research funding, and contribute to teaching at the undergraduate and graduate levels, as well as to graduate student supervision. Successful candidates must be suitable for prompt appointment to the Faculty of Graduate Studies. Applications must be received by **December 11, 2015**. Only applications received through the AMS MathJobs website, www.mathjobs.org, will be considered. Applicants will be asked to provide three signed letters of reference, one of which addresses teaching. All York University positions are subject to budgetary approval. York University is an Affirmative Action (AA) employer and strongly values diversity, including gender and sexual diversity, within its community. The AA program, which applies to Aboriginal people, visible minorities, people with disabilities, and women, can be found at http://yorku.ca/acadjobs or by calling the AA office at 416-736-5713.All qualified candidates are encouraged to apply; however, Canadian citizens and Permanent Residents will be given priority. Applicants wishing to self identify can do so by downloading and completing the form found at: http://acadjobs.info.yorku.ca/files/2014/12/AA-Self-ID-Form-October-2013.pdf. Once this form has been signed it can be uploaded to MathJobs.

YORK UNIVERSITY—Applications are invited from emerging world-class leaders in the areas of biostatistics, machine learning and big data analysis to be nominated for a Tier 2 Canada Research Chair at York University. Preference will be given to candidates with expertise in analyzing large volumes of data generated by biological and/or medical studies in areas that may include biological or computational vision research. Canada Research Chairs are research-intensive faculty positions providing the chair holder with an exceptional opportunity to grow their research program through the provision of protected time and enhanced access to research supports. The successful candidate should have a Ph.D. in statistics or a related field and a minimum of three years of postdoctoral experience at the time of taking up the appointment, with a prior faculty appointment preferred, or equivalent qualifications. The incumbent will also have an outstanding early career record including training and research awards and publications in high-quality refereed journals, and clear evidence of cross-disciplinary collaboration. The incumbent is also expected to demonstrate excellence or promise of excellence in graduate supervision and teaching and be eligible for prompt appointment to the Faculty of Graduate Studies.

The Department of Mathematics and Statistics has a strong research group developing methodology and applications in statistical machine learning and big data analysis. The incumbent must be willing and able to take a leadership role in the activities and development of a vibrant Big Data Statistics research group within the Department. The incumbent is expected to form strong collaborations with fellow researchers in cognate fields across the University, throughout Canada and internationally. In addition, he/she is expected to recruit graduate students and postdoctoral fellows, attract significant external funding, and develop new courses in the area of statistics, machine learning and the analysis of big data. The Department also has strong research groups with interests in medical research (including the Centre for Disease Modelling and the Centre for Vision Research), climate change as well as biological and financial applications. Related research hubs across the Faculty of Science and York University – including the York Institute for Health Research, and the High-Energy Physics Group – also provide excellent collaborative opportunities. Further information about the Department of Mathematics and Statistics in the Faculty of Science can be found at http://science.yorku.ca. The successful candidate will be appointed to a tenure-track position at the Assistant or Associate Professor level. The award of the Chair is subject to approval by the CRC program review process. Tier 2 Chairs have a five-year term, once renewable, and are intended for exceptional emerging researchers (i.e., typically with less than 10 years experience as an active researcher in their field, with consideration for career breaks) who have the acknowledged potential to lead their field of research. Information about the CRC program can be found at http://www.chairs.gc.ca. The start date for the position is July 1, 2016 or as soon as possible thereafter. Applications should be submitted via the AMS MathJobs site http://www.mathjobs.org/jobs and include a letter of interest (incorporating a brief five-year research plan and evidence of teaching effectiveness), curriculum vitae, and names and contact information of three referees. Applications must be received by **December 1, 2015**. All York University positions are subject to budgetary approval. York University is an Affirmative Action (AA) employer and strongly values diversity, including gender and sexual diversity, within its community. The AA program, which applies to Aboriginal people, visible minorities, people with disabilities, and women, can be found at http://yorku.ca/acadjobs or by calling the AA office at 416-736-5713.All qualified candidates are encouraged to apply; however, Canadian citizens and Permanent Residents will be given priority. Applicants wishing to self identify can do so by downloading and completing the form found at: http://acadjobs.info.yorku.ca/files/2014/12/AA-Self-ID-Form-October-2013.pdf. Once this form has been signed it can be uploaded to MathJobs.

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The AWM *Newsletter* is published six times a year. If you have questions, contact AWM at awm@awm-math.org, (703)934-0163, or visit our website at: http://www.awm-math.org.

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