AWM
ASSOCIATION FOR WOMEN IN MATHEMATICS

Volume 37, Number 6 NEWSLETTER November–December 2007

AWM Election!

Please vote online or via paper ballot. For further information, see pages 5–12. Ballot is due December 15, 2007.

IN THIS ISSUE

President's Report

Dear colleagues:

The dedication of the Ruth I. Michler Memorial Prize took place at the Mathematics Department at Cornell University. The weather was perfect and the campus was green and lush. Ruth's parents, Gerhard and Waltraud Michler, were present as were Barbara Keyfitz and I, as well as Sylvia Wiegand and Maura Mast, both of whom had known Ruth. Carolyn Gordon could not be present, but sent a letter to be read at the ceremony, which I would like to quote in full:

> I had the great pleasure of meeting Ruth Michler when she was just completing her Ph.D. and of getting to know her father Gerhard Michler during my time as AWM president. I have been deeply moved to watch the Ruth Michler Memorial Prize come to fruition through the vision and generosity of the Michler family. I am honored by their choice of the AWM as the administrator of the prize.
>
> In her brief but accomplished career, Ruth was already a caring mentor to other young women mathematicians and an emerging leader. How fitting to honor her memory with an award that will support outstanding women mathematicians at the stage in which they are developing leadership in research.
>
> Having enjoyed the warm hospitality of the Cornell Mathematics Department for several summers, I am also pleased by the choice of venue for the fellowship. My congratulations to Rebecca Goldin, whose achievements set a high standard for the Ruth Michler Memorial Prize.

Rebecca Goldin, who had already been at Cornell for several weeks, looked very happy and spoke of the prize as a life-changing experience. She gave a lively and well-received talk on "The Geometry of Polygons."

AWM
ASSOCIATION FOR WOMEN IN MATHEMATICS

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.

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.

Circulation: 3500.

Cornell University is a "city on a hill"—a place with high ideals and aspirations as well as a beautiful natural setting. In the more muddled and urban world of federal educational policy, two documents which may have major implications for pre-college education in the United States were recently offered for public comment.

On August 9, the National Science Board released a draft *National Action Plan for Addressing the Critical Needs of the U.S. Science, Technology, Engineering, and Mathematics Education System.* Comments were due within 21 days and the final version is scheduled to appear on October 3, a day before the fiftieth anniversary of the Sputnik launch. One appendix consists of a report from the Commission on 21st Century Education in Science, Technology, Engineering, and Mathematics.

Interestingly, the Commission report was submitted to the NSB in March. Media coverage of the Commission did not mention that the NSB intended to write a report of its own. This apparent change of plans made me curious about differences between the two reports.

One difference is that the NSB report advocates that a new position be created: Assistant Secretary of STEM Education in the U.S. Department of Education. Past history, in particular, that of the Department of Education's What Works Clearinghouse, makes me skeptical about such a notion (see Alan Schoenfeld's article "What Doesn't Work: The Challenge and Failure of the What Works Clearinghouse to Conduct Meaningful Reviews of Studies of Mathematics Curricula"). In any case, the significance of appointing a secretary of STEM education seems to me worthy of discussion. The Commission recommends establishment of a National Institute of STEM Educational Transformation—a national body chartered by Congress as is the National Academy of Sciences. Alas, I have yet to see any analysis of these differences in newspapers or blogs.

Both the NSB and Commission recommendations include the idea of voluntary comparison of state standards with other standards documents. These reports did not give examples, but I suspect that they might include the *College Board Standards for College Success* (discussed by Mary Morley in the preceding issue of this newsletter) or the benchmarks developed by Achieve's American Diploma Project.

A second document, the Miller–McKeon No Child Left Behind discussion draft was released on August 28 and briefly offered for public comment. The publicity surrounding this document seems entirely concerned with changing—and in some views, weakening—the "accountability measures." Certainly, this is important. But the recommendation (pp. 113–114) that the National Academy of Sciences develop a common scale to be used in comparing state

standards and assessments seems like a remarkable move to me, given the U.S. tradition of local control for education, or even the differences between the Achieve benchmarks and the College Board Standards. Assuming that it could be developed, this scale is then to be used by the Secretary of Education to compare and analyze state standards every two years.

An interesting counterpoint is the reception given to Danica McKellar's book *Math Doesn't Suck,* which is addressed to middle school girls. Given that almost half of grade 7–12 teachers of mathematics lack a major, full certification, or both, in mathematics, it may not be surprising that "clear explanations" like the following are well received by, for example, Wired.com. "A reciprocal of a fraction is found by flipping it upside down. If you want the reciprocal of a mixed number or a whole number, just convert it to an improper fraction, and then flip it!" "Going back and forth between percents and decimals is very easy. All you need to do is take away the % sign, then move the decimal point two places—that's it!"

The book raises several questions that have been or might be explored in education research.

For example, problems are set in contexts intended to be appealing to some girls. But, is setting problems in such contexts really helpful? A British study called "Do Girls Prefer Football to Fashion?," for example, found that girls performed less well on a problem set in the context of "fashion" than on an isomorphic problem set in the context of football (a.k.a. soccer) or with no real-world context at all.

The author discusses her struggles with mathematics, showing that she could learn mathematics—with effort. Are beliefs about effort and ability important? Cross-national studies such as those described in *The Learning Gap* suggest that they are. In contrast to students in China and Japan, students in the United States often seem to hold the belief that abilities are unchanged by effort. Recent work of the psychologist Carol Dweck and her colleagues complement those findings and suggest how they can be used to improve student learning.

Advertising for McKellar's book mentions the author's degree in mathematics. Is there a special "mathematical

MEMBERSHIP AND NEWSLETTER INFORMATION

Membership dues (Membership runs from Oct. 1 to Sept. 30)
Individual: $55 — Family (no newsletter): $30
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Student, unemployed, developing nations: $20
All foreign memberships: $10 additional for postage
Dues in excess of $15 and all contributions are deductible from federal taxable income when itemizing.
Institutional Members:
Level 1: $300
Level 2a or 2b: $175/$150
See www.awm-math.org for details on free ads, free student memberships, and ad discounts.
Affiliate Members: $250
Sponsors:
Friend: $1000+ — Patron: $2500+
Benefactor: $5000+ — Program Sponsor: $10,000+
See the AWM website for details.

Subscriptions and back orders
All members except family members receive a subscription to the newsletter as a privilege of membership. Libraries, women's studies centers, non-mathematics departments, etc., may purchase a subscription for $55/year ($65 foreign). Back orders are $10/issue plus shipping/handling ($5 minimum).

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

Newsletter ad information
AWM will accept advertisements for the *Newsletter* for positions available, programs in any of the mathematical sciences, professional activities and opportunities of interest to the AWM membership and other appropriate subjects. The 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 $100 for a basic four-line ad. Additional lines are $12 each. See the AWM website for *Newsletter* display ad rates.

Newsletter deadlines
Editorial: 24th of January, March, May, July, September, November
Ad: 1st of February, April, June, August, October, December

Addresses
Send all **Newsletter** material **except ads and book review material** to Anne Leggett, Department of Mathematics and Statistics, Loyola University, 6525 N. Sheridan Road, Chicago, IL 60626; e-mail: leggett@member.ams.org; phone: 773-508-3554; fax: 773-508-2123. Send all **book review** material to Marge Bayer, Department of Mathematics, University of Kansas, 405 Snow Hall, 1460 Jayhawk Boulevard, Lawrence, KS 66045-7523; e-mail: bayer@math.ku.edu; fax: 785-864-5255. Send everything else, **including ads and address changes**, to AWM, 11240 Waples Mill Road, Suite 200, Fairfax, VA 22030; phone: 703-934-0163; fax: 703-359-7562; e-mail: awm@awm-math.org.

knowledge for teaching" that is different from what is covered in the usual bachelor's degree program in mathematics? The Conference Board of the Mathematical Sciences Mathematical Education of Teachers gives examples of specialized mathematical knowledge used in teaching as does research of Liping Ma and Deborah Ball.

Finally, how would the knowledge in *Math Doesn't Suck* stack up against the knowledge in the *College Board Standards for College Success* or in textbooks from Japan and Singapore? Perhaps that common scale for standards and assessments advocated by the No Child Left Behind discussion draft will show us how it's done—but I'm not holding my breath. In the meantime, comparisons with textbooks from Japan and Singapore suggest interesting differences—but not a common scale.

Cathy Kessel
Berkeley, CA
September 25, 2007

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AWM ONLINE

AWM Web Editor
Holly Gaff
hgaff@odu.edu

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

Website and Online Forums
http://www.awm-math.org

AWM-NET

Editor: Dianne O'Leary
oleary@cs.umd.edu

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

AWM DEADLINES

SIAM Workshop: January 15, 2008

NSF-AWM Travel Grants:
February 1 and May 1, 2008

NSF-AWM Mentoring Travel Grants:
February 1, 2008

Kovalevsky High School Days:
February 4, 2008

Louise Hay Award: April 1, 2008

AWM OFFICE

Jennifer Lewis, Managing Director
DeeJay Garringo, Membership Director
11240 Waples Mill Road, Suite 200
Fairfax, VA 22030
phone: 703-934-0163
fax: 703-359-7562
awm@awm-math.org

AWM Election

This year, we are electing a President-Elect, Treasurer, and four Members-at-Large of the Executive Committee. The Member-at-Large positions are contested, so we encourage you to vote. Statements and biographical data provided by the candidates follow. Those elected will take office on February 1, 2008.

We apologize to the Nominating Committee for mixing together the 2005 and 2007 committees in our thank-you last issue. Again, our thanks to the Nominating Committee for putting together this fine slate of candidates. The correct list of names for this year's committee is: Carolyn Gordon (chair, Dartmouth College), Helen Grundman (Bryn Mawr College), Marianne Korten (Kansas State University), and Catherine Roberts (College of the Holy Cross).

You will receive an e-mail inviting you to vote on November 21, 2007. 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 28 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, 2007**, which is also the due date for paper ballots.

PRESIDENT-ELECT

Georgia Benkart, University of Wisconsin–Madison

I was just beginning graduate studies when AWM was founded. Then and now I marvel at the tenacity, wisdom, and foresight of its founders. But most especially, I have a deep appreciation for the generous outpouring of energy and hard work that gave birth to the organization and that have sustained it in the ensuing 36 years.

Only about 7% of the mathematics Ph.D.'s in the United States were awarded to women the year I graduated; today that number is roughly 30%. Has AWM had a profound influence on the mathematical community and culture? Unequivocally, the answer is yes.

With dwindling numbers of mathematics majors, the necessity for inconclusiveness and encouragement is even more critical. When one talented individual drops by the wayside, the loss is not just of that one, but also of the many individuals whose careers might have been impacted by that person. In 1972, AWM's first president, Mary Gray, outlined goals for the fledgling organization: equal admission to graduate study and support, equal pay for equal work, and equal consideration for faculty appointments and government grants, in assignment of duties, in administrative appointments, and in positions on review and advisory panels. Truly much has been achieved toward those goals, and AWM must continue its leadership role as an advocate for equity and for articulating new directions in the years ahead.

There are many gifted women mathematicians making significant contributions to research, teaching, and education. I look forward to the joys and challenges of working with such an impressive group and with the entire mathematical community in the capacity of President of AWM. The deciding factor in my acceptance of this nomination was the enthusiastic offer of help from everyone I contacted at AWM. I hope for continued generosity of energy and support in this endeavor.

Biographical Information: Georgia Benkart's training began in the Mathematics Honors Program at Ohio State University. This program, which flourished under the late Arnold Ross, offered small classes and a very nurturing environment. Everyone in her group ultimately received a Ph.D. in mathematics or some related field such as computer science. After earning M.Phil. and Ph.D. degrees from Yale, she was awarded a two-year (terminal) C.C. MacDuffee Instructorship at the University of Wisconsin-Madison, where she has spent her entire career and where she has been E.B. Van Vleck Professor of Mathematics. She has held visiting positions at the Aspen Center for Physics, the Institute for Advanced Study, and the Mathematical Sciences Research

Institute at Berkeley. Her research focuses on algebra, more specifically on Lie theory, combinatorics, and representation theory, and she has supervised 21 Ph.D. students who have worked on various aspects of these topics. Her professional activities include chairing the AMS Cole Prize and Monographs & Surveys Committees and serving on the AMS Council, the editorial boards of *Journal of Algebra* and *Algebra and Number Theory* and on many grant panels for the NSF, AMS, AWM, and NSERC, including the NSF's Panel on Minority Research Initiatives and Research Opportunities for Women. During 2000–02, she was the Polya Lecturer for the MAA and continues active involvement with the MAA while serving on its Short Course and MathFest Committees.

TREASURER

Rebecca Herb

I received my Ph.D. from the University of Washington, Seattle, in 1974 and was on the faculty of the University of Maryland, College Park, from 1977 until I retired in 2007. My main area of research is representation theory and harmonic analysis of real and p-adic reductive groups.

I have served the AWM as treasurer for the past four years. I have also served on the Council of the American Mathematical Society and on the Editorial Board of the Proceedings of the AMS.

The main tasks of the treasurer are working with the President and Managing Director to formulate yearly budgets and keeping the Executive Committee informed about the financial status of the association. I look forward to working with the officers, Executive Committee, and staff of the AWM in carrying out these duties.

MEMBER-AT-LARGE

Sylvia T. Bozeman, Spelman College

I am honored to be considered for membership on the AWM Executive Board as an At-Large Member. The AWM plays a critical role in the mathematics community where too many women still leave graduate school prematurely, too few women appear in the upper ranks of the nation's university faculties, and too many girls do not know that mathematics is for them. I look forward to working more closely with the AWM to facilitate the emergence of the next generation of women mathematicians and to strengthen the role of women currently in the mathematics community. As a member of the Executive Board I would fully support the AWM models for helping women to develop and advance.

Call for Nominations: 2009 Louise Hay Award

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

The nomination documents should include: a one to three page letter of nomination highlighting the exceptional contributions of the candidate to be recognized, a curriculum vitae of the candidate not to exceed three pages, and three letters supporting the nomination. It is strongly recommended that the letters represent a range of constituents affected by the nominee's work. *Five* complete copies of nomination materials for this award should be sent to: The Hay Award Selection Committee, Association for Women in Mathematics, 11240 Waples Mill Road, Suite 200, Fairfax, VA 22030. Nominations must be received by **April 30, 2008** and will be kept active for three years. For more information, phone (703) 934-0163, e-mail awm@awm-math.org or visit www.awm-math.org. Nominations via e-mail or fax will not be accepted.

Biographical Information: Sylvia T. Bozeman is Professor of Mathematics at Spelman College where she served ten years as Department Chair and four years as Associate Provost for Science and Mathematics. Her lifelong interests have included a concern for bringing more African Americans into the field of mathematics, with an expanded focus on women and other underrepresented groups over the past two decades. In a special partnership between the mathematics departments of Spelman College and Bryn Mawr College, Bozeman (with Rhonda Hughes) has co-directed a national program that assists women in making the transition from college (or work) to graduate school in mathematics, called Enhancing Diversity in Graduate Education (EDGE), for the past ten years. The EDGE Program is a successor to the Spelman-Bryn Mawr Summer Mathematics Program which was designed to attract lower-level college women to a career in mathematics.

Bozeman earned the B.S. degree from Alabama A&M University, the M.A. from Vanderbilt University, and the Ph.D. from Emory University, all in mathematics. Her research interests have included operator theory in functional analysis and projects in image processing. She has served terms on the MAA Board of Governors and the AMS Council as well as a previous term on the AWM Executive Board. She has served as Vice-President of NAM and as a member of the NAM Executive Board.

Beverly Diamond, College of Charleston

I have always thought about encouraging "women and girls to study and to have active careers in the mathematical sciences" in terms of best practices for the education of all, in all academic disciplines and otherwise. One wants to approach a student without a preconception of what he or she understands, instruct with an awareness of a variety of learning strategies, challenge students at all levels, and encourage all to achieve their best. I tend to think less about a career in the mathematical sciences, and more about a comfort with analysis, an understanding of logical rules, a confidence and ability to rise to reasonable technical demands wherever.

Unfortunately, not only do many of us fail at best practices, we fail in a systematic way that amounts to discrimination against particular groups. AWM has worked effectively for many years to raise our awareness of best practices and to mitigate systematic discrimination against females. With its various programs that support activities all the way from secondary school through research in the mathematical sciences by tenured female mathematicians, AWM plays a significant role in both the direct development of female mathematicians and the public's awareness of issues surrounding women in mathematics. Its role continues to be a valuable one, with the ongoing need for gender-specific role models at all levels of education, family-friendly leave policies, and sensitivity to discrimination of any sort. I would be pleased to contribute to AWM's work by serving on the Executive Committee.

I obtained my Ph.D. from the University of Manitoba and joined the College of Charleston in 1984. I have held visiting positions at the University of Delaware and Montana State University, and I served as a Program Officer at the National Science Foundation from 1996 to 1998. I am currently Professor of Mathematics and Associate Provost at the College of Charleston, with this last position as of August 2007. I expect to work primarily on faculty issues: compensation, workload, budgeting, diversity, etc. I have served on AWM's Selection Panel for Travel and Mentoring Grants and on the AMS Council as a Member-at-Large.

Sharon Frechette, College of the Holy Cross

I have personally felt the tremendous impact the AWM can have on the career of a young woman mathematician. I participated in AWM workshops as both a graduate student and a new Ph.D., and I received AWM travel funding to attend an important research conference early in my career. I have since been honored to serve the AWM on numerous committees, including the Workshop Selection Committee. I am eager to support the important and significant work of the AWM more broadly, as a Member-at-Large.

As the mother of two young daughters, I am keenly aware of the importance of encouraging girls and young women to pursue their interests in science and mathematics. I have contributed to the AWM's efforts as a judge for the AWM Essay Contest and as a member of the Schafer Prize Selection Committee. I have also been a co-organizer of "Hogwarts at Holy Cross," a hands-on science and math event geared toward children in elementary and middle school, open to families in the Holy Cross and greater Worcester community. Within this more broadly aimed event, I have seen wonderful interactions between the girls who participate and the undergraduate women who lead them through the activities. As a Member-at-Large, I want use my experience to support and expand the AWM's outreach toward young girls. I am also eager to serve as an advocate for women who face the challenges, particularly during the pre-tenure years, of excelling in our profession while raising a family.

Biographical Information: Sharon Frechette is currently an Associate Professor of Mathematics at the College of the Holy Cross. As an undergraduate, she majored in mathematics at Boston University. She worked in an administrative position at Dartmouth-Hitchcock Medical Center from 1990 to 1992 and then returned to school, earning her Ph.D. in mathematics from Dartmouth College in 1997. Prior to teaching at Holy Cross, Sharon spent three years as a Visiting Assistant Professor at Wellesley College and was a Project NExT Fellow in 1997–1998. Her research in number theory has been supported by the NSA and focuses on modular forms, L-functions, and related objects such as hypergeometric functions on finite fields. In 2004, Sharon co-organized the 18th Annual Workshop on Modular Forms and Related Topics, and she has also co-organized two AMS special sessions at the Joint Mathematics Meetings. Among her numerous service commitments to the AWM over the past ten years, Sharon represented the AWM in 2005 at the National Conference of the Association for Women in Science.

Sarah J. Greenwald, Appalachia State University

I would welcome the exciting opportunity to serve on the AWM Executive Committee. AWM, the premiere organization to promote women in the mathematical sciences, is an organization that I have long supported by participating in AWM activities, occasionally writing newsletter articles, and, since 2003, serving the organization as a book editor consultant. I bring to the table a diverse range of interests, along with scholarship, teaching experiences, and service specifically related to women and minorities in mathematics. Participating in Sonia Kovalevsky High School Mathematics Days and organizing workshops as a co-PI on successive MAA Tensor grants for high school girls have been particularly rewarding experiences. I have taught courses on women and minorities in mathematics and published related refereed articles. I have also been a member of the JPBM Advisory Panel for Mathematics Awareness Month and of numerous MAA committees, including two successive terms on the MAA Committee on Policies on Science.

In the 1990s, AWM publicized an article about why the organization was still needed. With Lawrence Summers's relatively recent comments about women in mathematics and calls to increase the number of majors from among the minority and women student populations, it is clearer to the public why AWM is needed. I was honored to be nominated for Member-at-Large on the AWM Executive Committee, and I would relish the opportunity to help AWM continue to provide strong role models and to support and encourage students and faculty.

Biographical Information: Sarah J. Greenwald is an Associate Professor of Mathematics and a Women's Studies core faculty member at Appalachian State University. She received her Ph.D. from the University of Pennsylvania. Her scholarship areas include Riemannian geometry, popular culture and mathematics, and women and minorities in

mathematics, and she is a 2005 Mathematical Association of America Alder Award winner for distinguished teaching. She co-created the educational website SimpsonsMath.com with Andrew Nestler, and her interactive mathematics lecture is listed on the DVD extras for the upcoming 20th Century Fox *Futurama* movie *Bender's Big Score.* Greenwald has spoken about women in mathematics and the effects of scientific popular culture representations on NPR's *Science Friday* and all over the country.

Ruth Haas, Smith College

Women are still in the minority in mathematics. At all levels and all stages, women drop out or drop down at a higher rate than men. As long as this is the case, there is a role for the AWM. The AWM should help women find fellowship (!) in the mathematical community and help all mathematicians and their employers learn to treat colleagues fairly, supportively and without bias.

Doing mathematics is hard because, by its nature, we are facing something unknown. For the same reason, there are many stages of being a mathematician and an academic that seem hard as well. AWM is a community of mathematicians at all levels and stages, with a variety of career paths, who can be examples for each others on how one gets a job, gets tenure, continues doing research while balancing the other aspects of a full life.

Through its sponsored and co-sponsored prizes, invited lectures, and workshops, the AWM works to promote the visibility and success of some of the best women in mathematics. This is important, and should continue. In addition, however, we must support all women in mathematics by fostering community and helping each of us remember that being an average mathematician is a great achievement. I appreciate being nominated for the AWM Executive

NSF-AWM Mentoring Travel Grants for Women

The objective of the NSF-AWM Mentoring Travel Grants is to help junior women to develop a long-term working and mentoring relationship with a senior mathematician. This relationship should help the junior mathematician to establish her research program and eventually receive tenure. AWM expects to award up to seven grants, in amounts up to $5000 each. Each grant will fund travel, accommodations, and other required expenses for an untenured woman mathematician to travel to an institute or a department to do research with a specified individual for one month. Awardees may request to use any unexpended funds for further travel to work with the same individual during the following year. In such cases, a formal request must be submitted by the following February 1st to the selection committee, or the funds will be released for reallocation. (Applicants for mentoring travel grants may in exceptional cases receive two such grants throughout their careers, possibly in successive years; the second such grant would require a new proposal and would go through the usual competition.) For foreign travel, US air carriers must be used (exceptions only per federal grant regulations; prior AWM approval required).

Eligibility. Applicants must be women holding a doctorate or equivalent experience and with a work address in the US (or home address if unemployed). The applicant's research may be in any field that is supported by the Division of Mathematical Sciences of the National Science Foundation. (See http://www.nsf.gov/od/lpa/news/publicat/nsf03009/mps/dms.htm#1 for the list of supported areas.)

All applications must be submitted online via the web-based system which is available through a hotlink at http://www.awm-math.org/travelgrants.html. The application requirements and a complete step-by-step process are available at the online site. If you have not already done so you must first create a user account—this will be the first screen when you access the site. During the application process you will be asked to attach one .pdf file that includes your research proposal (approximately five pages in length, specifying why the proposed travel would be particularly beneficial), CV, proposed budget and information on current and pending funding, if applicable. In a second step you will be asked to attach one .pdf file that includes the proposed mentor's letter of support (indicating his/her availability at the proposed travel time) and CV. You may contact Jennifer Lewis at 703-934-0163, ext. 213 for guidance. A final report will be required from each awardee. All awards will be determined on a competitive basis by a selection panel consisting of distinguished mathematicians appointed by the AWM. The deadline for receipt of applications is **February 1, 2008**.

Committee as I hope to be able to help it support and promote all women in mathematics.

Biographical Information: Ruth Haas has been at Smith College for 18 years where she is currently Chair of the Department of Mathematics and Statistics. In the 1990s, she was instrumental in starting its engineering program (the first at a women's college) and recently co-founded the NSF-funded Center for Women in Mathematics. The Center hosts the first U.S. post-baccalaureate program in mathematics, which is designed for women with bachelor's degrees who are considering mathematics graduate school but lack sufficient preparation.

Ruth earned a bachelor's degree from Swarthmore College and Ph.D. from Cornell University. She has held positions at North Carolina State University, The University of Twente in the Netherlands, and Smith College. She has also taught in a variety of summer enrichment programs for high school students, high school teachers, and the Summer Program for Women in Mathematics at George Washington University. She has actively engaged undergraduates in much of her research.

Her main areas of research are graph theory and algebraic combinatorics. More specifically, she has published in the combinatorial aspects of Weyl groups, graph coloring,

NSF-AWM Travel Grants for Women

The objective of the NSF-AWM Travel Grants program is to enable women researchers in mathematics or in mathematics education to attend research conferences in their fields, thereby providing a valuable opportunity to advance their research activities and their visibility in the research community. By having more women attend such meetings, we also increase the size of the pool from which speakers at subsequent meetings may be drawn and thus address the persistent problem of the absence of women speakers at some research conferences. All awards will be determined on a competitive basis by a selection panel consisting of distinguished mathematicians appointed by the AWM.

Travel Grants. Two types of grants are available. 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. The Mathematics Education Research Travel grants provide full or partial support for travel and subsistence in math/math education research, for mathematicians attending a math education research conference or math education researchers attending a math conference. In either case, a maximum of $1500 for domestic travel and of $2000 for foreign travel will be applied. For foreign travel, US air carriers must be used (exceptions only per federal grants regulations; prior AWM approval required).

Eligibility. These travel funds are provided by the Division of Mathematical Sciences (DMS) and the Division of Research, Evaluation and Communication (REC) of the NSF. The conference or the applicant's research must be in an area supported by DMS. Applicants must be women holding a doctorate (or equivalent experience) and with a work address in the USA (or home address, in case of unemployed mathematicians). Anyone who has been awarded an AWM-NSF travel grant in the past two years is ineligible. Anyone receiving more than $2000 yearly in external governmental funding for travel is ineligible. Partial travel support from the applicant's institution or from a non-governmental agency does not, however, make the applicant ineligible.

Applications. All applications must be submitted online via the web-based system which is available through a hotlink at http://www.awm-math.org/travelgrants.html. The application requirements and a complete step-by-step process are available at the online site. If you have not already done so you must first create a user account—this will be the first screen when you access the site. During the application process you will be asked to attach one .pdf file that includes your proposal, CV and current and pending funding information, as applicable. If you have a speaker confirmation letter or e-mail notification, scan the document as an electronic file and attach it as a .pdf. In addition, please complete the application pre-survey administered by an independent evaluator. You may contact Jennifer Lewis at 703-934-0163, ext. 213 for guidance. There are three award periods per year. The next two deadlines for receipt of applications are **February 1** and **May 1, 2008**.

graph domination, rigidity, and the algebraic aspects of splines. Recent invited talks include a plenary address at MAA MathFest 2005, a plenary address at the Midwest Conference on Combinatorics, Cryptography, and Computing 2005, and the keynote address at Career Mentoring Workshop 2007. From 1995–2005 she co-organized the Combinatorics of New England (CONE) Conference series.

Claudia Polini, University of Notre Dame

It is an honor to have been nominated as a Member-at-Large of the Association for Women in Mathematics. Before receiving my first NSF grant, I have benefited greatly from the help and support of the AWM through its travel, workshop, and mentoring grants. Later in my career, when I was asked to participate in and help organize AWM workshops for graduate students, I did so with great pleasure, considering that this was my way of giving back to an association that did so much for me.

Over the past few years I found myself advising, mentoring, and supporting many young female graduate students here at Notre Dame, as well as at Purdue University, where I frequently go to collaborate with some of its faculty members. At Notre Dame, I have created the ND Association of Women in Mathematics. The association includes both graduate and undergraduate students as its members. We meet several times a year organizing panel discussions with invited speakers. We also frequently have lunch together, where we exchange experiences and we support each other in various aspects of our lives, from our individual research/work progress to practical matters such as family/child care issues and others. I believe it is very important for every university to have this or a similar type of association.

If elected, I would like to enhance the already wonderful job the AWM does to support women and their research, through its mentoring, travel, and workshop grants. I believe that these opportunities are crucial in one's career, especially since it is not easy for young mathematicians to obtain funding for research. Furthermore, I support efforts by the AWM to reach high school and middle school students. I believe that such activities are vital in encouraging young female students to pursue a career in our field.

Biographical Information: Claudia Polini was an undergraduate student in mathematics at the University of Padua, Italy. She received her Ph.D. in mathematics from Rutgers University in 1995 under the direction of Professor Wolmer Vasconcelos. Her research interests lie in commutative algebra. She did her postdoc at Michigan State University under the supervision of Professor Bernd Ulrich (1995–1998). Subsequently, she held tenure track positions at Hope College, Michigan (1998–2000), the University of Oregon (2000–2001), and finally, the University of Notre Dame (2001–present). She was promoted to Associate Professor in 2004. She currently actively pursues her research interests while advising two female graduate students.

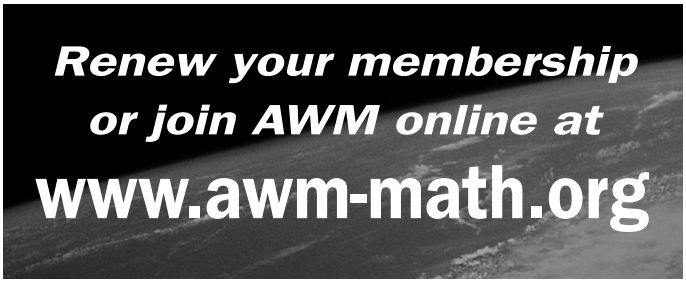
Lisa Traynor, Bryn Mawr College

I am honored to run for the position of Member-at-Large of the AWM Executive Committee. In line with the goals of AWM, I am deeply committed to supporting females in their mathematical studies and careers, and I value the opportunities made available by AWM. I have been an AWM member since I was a graduate student. I enjoy meeting and talking with female mathematicians at all levels of their studies and careers. For the very young, I have led mathematical workshops on knots for girls in grades 6–8. At Bryn Mawr (a women's college), I have initiated a series of "Career Talks" targeted at our freshman and sophomores so they become aware of the vast array of opportunities available to women with mathematical training. Over the years, I have organized and participated in a variety of activities for women graduate students and postdoctoral fellows including being on panels that describe "life as an academic" and "the job search from the hiring perspective."

As Member-at-Large, I would work on and be a main liaison to the AWM President for one of AWM's major programs of Membership, Meetings and Programs, Fundraising, or Policy and Advocacy. I hope to bring my previous leadership experiences to help me be effective as a Member-at-Large. For the last decade, I have been on the Program

Committee for the IAS Women and Mathematics Program held in Princeton each May. For the AMS, I served as Member-at-Large for the Council and as a Member of the Education Committee from 2000–2003. I am currently on the AMS Nominating Committee, and since 2000 I have been an Associate Editor for the *Notices* of the AMS. At Bryn Mawr College, I am currently serving as Chair of the Department of Mathematics. I would welcome the opportunity to become more involved in the leadership of AWM.

Biographical Information: Lisa Traynor was an undergraduate mathematics major at Beloit College in Wisconsin. She completed her Ph.D. in 1992 at SUNY Stony Brook under the direction of Dusa McDuff. She then went on to postdoctoral positions at MSRI, Stanford, and the Institut Henri Poincaré in Paris before joining the faculty at Bryn Mawr College. She is now Professor and Chair of the Department of Mathematics at Bryn Mawr. Her research interests are in symplectic and contact topology.



Sonia Kovalevsky High School Mathematics Days

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

An additional selection cycle will be held in February 2008 for Spring 2008 using funds remaining after the August 2007 selection cycle. AWM anticipates awarding up to six additional grants ranging on average from $1500 to $2200 each ($3000 maximum per school) to universities and colleges. Historically Black colleges and universities are particularly encouraged to apply. Programs targeted toward inner city or rural high schools are especially welcome.

Applications, not to exceed six pages, should include: a) a cover letter including the proposed date of the SK Day, expected number of attendees (with ethnic background, if known), grade level the program is aimed toward (e.g., 9th and 10th grade only), total amount requested, and organizer(s) contact information, b) plans for activities, including specific speakers to the extent known; c) qualifications of the person(s) to be in charge; d) plans for recruitment, including the securing of diversity among participants; e) detailed itemized budget (i.e., food, room rental, advertising, copying, supplies, student giveaways, etc. Honoraria for speakers should be reasonable and should not, in total, exceed 20% of the overall budget. Stipends and personnel costs are not permitted for organizers. This grant does not permit reimbursement for indirect costs or fringe benefits. Please itemize direct costs in budget.); f) local resources in support of the project, if any; and g) tentative follow-up and evaluation plans.

The decision on funding will be made in late February for high school days to be held in Spring 2008. If selected, a report of the event along with receipts (originals or copies) for reimbursement must be submitted to AWM within 30 days of the event date or by June 1, 2008, whichever comes first. Reimbursements will be made in one disbursement; no funds will be disbursed prior to the event date.

Send five complete copies of the application materials to: Sonia Kovalevsky Days Selection Committee, Association for Women in Mathematics, 11240 Waples Mill Road, Suite 200, Fairfax, VA 22030. For further information: phone 703-934-0163, e-mail awm@awm-math.org, or visit www.awm-math.org. Applications must be received by **February 4, 2008**; applications via e-mail or fax will not be accepted.

AWM Workshop for Women Graduate Students and Recent Ph.D's

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

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

WHEN: An AWM Workshop is scheduled to be held in conjunction with the SIAM Annual Meeting, San Diego, CA, July 7–11, 2008.

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

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

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

Workshop Selection Committee
11240 Waples Mill Road, Suite 200
Fairfax, VA 22030

Phone: 703-934-0163
E-mail: awm@awm-math.org URL: www.awm-math.org

APPLICATION DEADLINE

Applications must be received by **January 15, 2008**. Applications via e-mail or fax will not be accepted.

Matrices, Epidemics, and Olga Taussky Todd

by Barbara Lee Keyfitz, reprinted with permission from SIAM News, *Vol. 40, October 2007*

Much of the mood of ICIAM '07 was celebratory, so perhaps it would be inaccurate to single out the first AWM-EWM-ICIAM Olga Taussky Todd Lecture as a celebration. Nonetheless, the crowd that assembled early Tuesday evening to hear Pauline van den Driessche's talk, "Matrices in Action for Epidemic Models," participated in an emotional as well as an intellectual high point of the Congress. The elegant lecture room in the ETH Hauptgebäude contributed to the mood, with its perfect facilities for a well-prepared talk that attracted many non-mathematician guests as well as enough delegates to snap up the 250 T-shirts contributed by Google.

The idea of a lecture at ICIAM, given by a woman "who has made outstanding contributions in applied mathematics and/or scientific computation" and co-sponsored by the Association for Women in Mathematics (AWM) and European Women in Mathematics (EWM), had been discussed for some time. The model is the very successful "Emmy Noether Lecture" now given at the International Congress of Mathematicians. After a warm reception of the idea by the ICIAM Board, Rolf Jeltsch not only gave the lecture a plenary spot at ICIAM '07, but also arranged for Google's sponsorship of the event. (Google also hosted a reception after the talk, where they gave away the famous T-shirts: black with "Google" in bright pink, the second "o" replaced by the female symbol ♀.) It was the ICIAM Board that suggested naming the series after Olga Taussky Todd, who, like Emmy Noether before her, had ties both to Europe and to the US, and triumphed over adversity to contribute to the research enterprise at the highest level. Both also became role models for women everywhere.

It took the concentrated effort of many people to turn a good idea into a great event. Marjo Lipponen and Laura Tedeschini of European Women in Mathematics helped to make the lecture a joint award. Fern Hunt set up a committee to write terms of reference, with Joyce McLaughlin as chair. An early decision was that all fields of applied and industrial mathematics, including computational science, would be appropriate for the award, but that special consideration for the first lecture should be given to the fields in which Olga Taussky Todd had worked. This helped, but only slightly, to whittle down the list of excellent nominations received. As chair of the selection committee (Angelika Bunse-Gerstner, Chandler Davis, Robert Tichy, Christine Bessenrodt, Richard Varga), I would also like to acknowledge the many supportive men who contributed time, ideas, and nominations. First among them is the late John Todd, who gave the project his blessing and encouragement. And all involved are grateful to Frank Uhlig, who presented a wonderful framed photograph of the Todds to Pauline van den Driessche.

Pauline van den Driessche has earned an international reputation for her research in both linear algebra and mathematical biology. In addition, she has served as an inspiration, and a mentor, to the numerous young researchers who have worked under her supervision as students or postdoctoral fellows. Her degrees are from Imperial College, London, and the University College of Wales. She was a faculty member at the University of Victoria, in British Columbia, from 1965 until 2006, when she became an emeritus professor and an adjunct professor in the Department of Computer Science. She was a co-recipient of the Bellman prize (2002–2003) and is the 2007 recipient of the Canadian Mathematical Society's Krieger-Nelson Prize. The Canadian MITACS group with which she works on the dynamics of epidemics has had a major impact in mathematical biology. Techniques developed by the group are used in formulating and analyzing models of epidemics such as West Nile Virus and HIV/AIDS.

Even before a word is spoken about mathematical models, the subject of infectious diseases is guaranteed to fascinate an audience. Pandemic influenza outbreaks cause millions of deaths worldwide (20 million for the "Spanish Flu" of 1918–19, when the world was much less populated and less crowded than it is today), and these days reports of avian influenza are often in the news. Less commonly known is that public health agencies, including Health Canada and the US Centers for Disease Control, use mathematical models, and are greatly interested in the development of new models, to predict epidemics and to devise control strategies. (When I contacted Pauline to discuss this article, she had just returned from a

CDC summer school she helped to conduct.) And although the concepts presented in the talk were greatly simplified to suit a general audience, one suspects that researchers in this field routinely present stripped-down versions of their work to their nonquantitative clients.

Officials at the CDC probably do not get to learn about the legacy of Olga Taussky Todd and the role of matrix theory—and maybe this is not information they need—but Van den Driessche's references to linear algebra in the talk at ICIAM went far beyond a mere gracious acknowledgment of the occasion. It does not hurt even advanced students of applied mathematics to be reminded that linear problems—and the language of matrices in which they are expressed—lie at the base of much mathematical modelling, even when realistic models are necessarily nonlinear.

Van den Driessche focused on one central goal in the construction of models: estimation of $\mathcal{R}_0$, the average number of individuals an infected individual will infect. The simplest (S-I-R) model divides a population, assumed otherwise to be homogeneous and spatially mixed, into three classes (susceptible, infected, recovered), with rules for moving from one class to another. Rates of transmission are found from theoretical principles, empirical rules, and data. The problems get more interesting as they become more realistic, further dividing the population into classes by age, adding latency periods, and incorporating spatial inhomogeneity in some way. Most interesting of all is to include intervention strategies (vaccination or isolation, for example), and yet more classes, to allow for conditions like partial immunity. Mathematical models can quantify qualitative hunches, such as the change of $\mathcal{R}_0$ when travel between regions increases. The final part of the lecture examined nonlinear models more closely. Typically, these contain many equilibria, some ("disease-free") more desirable than others ("endemic"), and the study of their stability provides some elegant applications of bifurcation theory. Open questions include the best way to incorporate spatial effects, which may mean analyzing coupled partial differential equations, and how to model contact networks, which also means understanding better how infectious diseases are really transmitted.

Enthusiastic questioning of the speaker at the end of the talk indicated a desire on the part of the audience to learn more about this area. The following list will get interested readers off to a good start:

R. M. Anderson, R. M. May. *Infectious Diseases of Humans. Dynamics and Control. Oxford University Press.* 1991

J. Arino, F. Brauer, P. van den Driessche, J. Watmough, J. Wu. Simple models for containment of a pandemic, *J. Roy. Soc. Interface* 3:453-457 (2006).

J. Arino, C. C. McCluskey, P. van den Driessche. Global results for an epidemic model with vaccination that exhibits backward bifurcation, *SIAM J. Appl. Math.* 64:260-276 (2003).

O. Diekmann, J. A. P. Heesterbeek. *Mathematical Epidemiology of Infectious Diseases. Model Building, Analysis and Interpretation.* Wiley. 2000

H. W. Hethcote. The mathematics of infectious diseases. *SIAM Review* 42:599-653 (2000).

Y.-H. Hsieh, P. van den Driessche, L. Wang. Impact of travel between patches for spatial spread of disease, *Bull. Math. Biol.* 69:1355-1375 (2007).

P. van den Driessche, J. Watmough. Reproduction numbers and sub-threshold endemic equilibria for compartmental models of disease transmission, *Math. Biosciences* 180:29-48 (2002).

Barbara Keyfitz, a former president of the AWM, is director of the Fields Institute and a professor of mathematics at the University of Houston.

AWM Workshop at Snowbird

The 2007 AWM Workshop for Women Graduate Students and Recent Ph.D.'s held in conjunction with a SIAM meeting was unusual: there was no annual SIAM meeting due to the 6th ICIAM meeting, so our workshop was held on May 30th at the SIAM Dynamical Systems Meeting in picturesque Snowbird, Utah.

A highlight of the workshop was the presentation of the Sonia Kovalevsky Prize Award to Professor Lai-Sang Young. As we reported in the May–June issue of this newsletter, the prize "recognizes her fundamental contributions in the field of ergodic theory and dynamical systems. Her pioneering research has had a significant impact in the investigation of dynamical complexity, strange attractors and probabilistic laws of chaotic systems. Her interests include theory, applications and deep connections to mathematical physics and probability.… Chaotic dynamical systems are her specialty; the main themes of her research interests are measurements of dynamical complexity, strange attractors, cumulative effects of small random perturbations on long term behavior of dynamical systems, and probabilistic laws for chaotic systems."

The abstract for her fascinating lecture "Shear-Induced Chaos" was: "I will discuss the phenomenon of shear-induced chaos in driven dynamical systems. The unforced system is assumed to have certain simple structures, such as attracting periodic solutions or equilibria undergoing Hopf bifurcations. Specifics of the defining equations are unimportant. A geometric mechanism for producing chaos is proposed. In the case of periodic kicks followed by long relaxations, rigorous results establishing the presence of strange attractors with SRB measures are presented. These attractors are in a class of chaotic systems that can be modeled (roughly) by countable-state Markov chains. From this I deduce information on their statistical properties. In the last part of this talk,

After LaiSang Young's talk

Picturesque Snowbird, Utah, was the setting for the 207 AWM Workshop for Women Graduate Students and Recent Ph.D.'s.

Workshop dinner

I will return to the phenomenon of shear-induced chaos, to explore numerically the range of validity of the geometric ideas. Examples including randomly forced coupled oscillators will be discussed. I am reporting on joint works with a number of co-authors."

As always there was a dinner for all workshop participants and a panel of senior mathematicians giving excellent career advice. The panelists this year were: Gerda de Vries, University of Alberta, Canada; Barbara Keyfitz, Fields Institute and University of Houston; Deborah Lockhart, National Science Foundation; and Emily F. Stone, University of Montana.

We would like to thank the Office of Naval Research and the Air Force Office of Scientific Research for their support of this workshop. We also thank the organizers of the workshop: Trachette Jackson (University of Michigan), Mary Silber (Northwestern University), and Mary Lou Zeeman (Bowdoin College). We appreciate the contributions of the mentors (from departments of mathematics unless otherwise indicated): Janet Best (Ohio State University), Sue Ann Campbell (Department of Applied Mathematics, University of Waterloo), Sarah Day (College of William and Mary), Gerda de Vries (Department of Mathematical and Statistical Sciences, University of Alberta), Cristina Depassier (Physics, P. Universidad Catolica de Chile, Santiago), Eva Kanso (Aerospace and Mechanical Engineering, University of Southern California), Judy Kennedy (Department of Mathematical Sciences, University of Deleware), Barbara Keyfitz (Fields Institute and University of Houston), Vivien Kirk (University of Auckland, New Zealand), Katja Lindenberg, (Department of Chemistry and Biochemistry, University of California, San Diego), Deborah Lockhart (Division of Mathematical Sciences, National Science Foundation), Hinke Osinga (Department of Engineering Mathematics, University of Bristol, UK), Vered Rom-Kedar (Applied Mathematics and Computer Science Department, Weizmann Institute), Evelyn Sander (Department of Mathematical Sciences, George Mason University), Mary Silber (Applied Mathematics Department, Northwestern University), Linda Smolka (Bucknell University), Emily Stone (University of Montana), Ioana Triandaf (Research Scientist, Naval

Maya Mincheva, University of Wisconsin

Research Lab), Jane Wang (Department of Theoretical and Applied Mechanics, Cornell University), and Mary Lou Zeeman (Bowdoin College).

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

AWM Minisymposium: Dynamical Systems and Applications to Mathematical Biology

Anne J. Catlla, Duke University
Modeling of Glial Cells in Neural-glial Networks

Christina S. Hayes, Gettysburg College
The Infinite Population Genetic Algorithm:
A Dynamical System with Generic Properties

Maya Mincheva, University of Wisconsin
Dynamical Properties of Biochemical Reaction Networks

Mihaela Predescu, Bentley College
On the Dynamics of Some Nonlinear Discrete Models

AWM Minisymposium: Partial Differential Equations and Physical Systems

Vera M. Hur, MIT
Rotational Stokes Waves of Finite Depth:
Existence and Stability

Claire Postlethwaite, Northwestern University
Controlling Traveling Waves of the Complex
Ginzburg-Landau Equation with Spatial Feedback

Janet D. Scheel, California Lutheran University
The Amplitude Equation for Rotating Rayleigh-
Benard Convection

Luz M. Vela-Arevalo, Georgia Tech
Coherent States of Spatial Periodically Driven
Hydrogen Atom

Graduate Student Posters Presentations

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

Alethea Barbaro, UC Santa Barbara
Modeling Migration: Simulating the Migration
of the Capelin Around Iceland

Jessica Conway, Northwestern University
Superlattice Patterns in Oscillatory Systems
with Three-Frequency Forcing

Hye-Won Kang, University of Wisconsin
Multiscale Method in Heat Shock Model

Yun Kang, Arizona State University
A Producer-Grazer Model: Dynamics and Spatial Structure

Allison Kolpas, UC Santa Barbara
Coarse Analysis of Stochasticity-Induced
Switching in a Schooling Model

Joohee Lee, University of North Carolina
Analysis of a 2D Smoluchowski Equation
for Magnetic Dispersions

Margo Levine, Northwestern University
Self-Assembly of Quantum Dots in a Thin
Epitaxial Film Wetting an Elastic Substrate

Monique Taylor, North Carolina State University
Dafermos Regularization of the Modified KdV
Burgers Equation

Rebecca Vandiver, University of Arizona
Elastic Growth in Tissues

Jue Wang, University of Wisconsin, Madison
Lower Branch ECS – Backbone of the Separatrix

Elizabeth Zollinger, Boston University
Minimizing Action Integrals in the Comet 3-Body Problem

Jue Wang (University of Wisconsin, Madison)

Allison Kolpas (UC Santa Barbara)

Elizabeth Zollinger (Boston University)

Christina S. Hayes (Gettysburg College)

Claire Postlethwaite (Northwestern University)

Poster session

Joohee Lee (University of North Carolina)

Family and Career

Summer M. Husband, Metron, Inc.

Like a lot of women, I have always been a planner. I began graduate school with a vision of what my life was going to look like. I would have two children eighteen months apart followed by two years off to be at home with them before pursuing a career in academics. Heartbroken and reeling after the loss of my first child shortly after his birth and my second midway into my pregnancy, I scrapped the plan. Five years, a Ph.D. and three miracles later, I now find myself living in two worlds. I spend most of my days as a mender of wounds, resolver of disputes, spectator of gymnastic feats and a thousand other sometimes tedious but also blessed jobs. Then three days a week I step into the alternate reality of professional mathematical research. There is a secret I would love to share with other women mathematicians. Academics is not the only place to do interesting mathematics. Scientific consulting can offer research level mathematics along with freedom and flexibility.

I work for Metron, Inc., a D.C. area scientific consulting firm. At Metron, I have found the opportunity to pursue mathematical research in areas such as adaptive classifiers, automatic target recognition and distributed Bayesian networks. From top-level management down, most Metron employees hold Ph.D.'s in mathematics or related fields. The hiring strategy is to find smart people who can pick up new areas of mathematics. I have used my graduate school training in graph theory, but part of my job has been to learn new areas of mathematics including Bayesian probability theory and classifier theory. The objective is not simply to find an algorithm that works and use it. We are expected to understand the mathematics behind what we do, apply it to challenging problems and in many cases develop new results. Many employees publish their results in peer-reviewed journals. Additionally, we present our work to one another in employee-conducted brown bag seminars (recent topics include group detection algorithms and tracking change detection) and an annual meeting that consists of a series of employee presentations of their recent research.

As much as I appreciate the mathematically challenging atmosphere and work, the family friendly and flexible work environment is at least as important to me. I telecommute and have flexible and reduced hours. In a typical week, I work two early mornings from home while my husband runs point with the kids, and I go into the office one day a week. After the births of each of my younger boys, I have been able to decide how much time I need off before returning to work (six months and three months, respectively). I have had to cancel meetings when my kids have been sick and have never had a problem with co-workers or my boss. Metron paid for a babysitter so that I could participate in recruiting at the AMS meeting. Overall, I feel that people here care about my family. Little things, such as presents at the births of my children, make me feel like Metron sees my children as a vital part of my life and not as little people who interfere with my work schedule.

In preparing this article, I began to wonder if I am an anomaly at Metron—am I the only one who is this passionate about the environment. In speaking with the two other female analysts at Metron, I found that I am not alone. We all named the flexible and family-friendly atmosphere as essential to our job satisfaction. Christine has a master's degree in computer science and has been with Metron for twelve years. She works on both analysis and coding. After the birth of her daughter four years ago, Christine took three months of paid maternity leave followed by two months of accrued vacation. She has been working a 30-hour week along with periodic telecommuting ever since. Mary has a Ph.D. in physics and has been working on software design and analysis of discrete event simulation at Metron for six years. She has school-aged children, telecommutes and works early hours. Elana has a Ph.D. in applied mathematics, and her graduate research was in numerical weather prediction. She has been with Metron for about six months working on airborne laser mine detection. Elana works full time and telecommutes approximately two days a week. This enables her and her husband to work out a two-body problem. Additionally, knowing that flexible and reduced hours are available played a major role in Elana accepting a position here.

Scientific consulting can offer interesting and flexible work. Historically Metron has had difficulty recruiting women, though. In speaking with our human resources manager and other women in the field, I think this is for a number of reasons. First, it is difficult to recruit women without a preexisting critical mass. Second, Metron is a small company and we do not have formal flex time, reduced hours, and telecommuting programs. These issues are worked out on a case by case basis and in my experience have been generous. Finally, some women may have mixed feelings about working for a defense contractor. This is more difficult to address, but it is worth noting that many of the projects are concerned with defense in the strictest sense of the word—problems such as road side bomb detection, sea mine detection and mine countermeasures.

My life does not resemble the detailed plan I formulated as a first-year graduate student. As difficult as my losses have been, I am grateful for the freedom they brought. For most of my academic life I felt obligated to balance career and family in a way that minimally hampered my career. After losing my first two babies, I felt like I had permission to say what I had always really wanted—if I ever had kids, I wanted to be primarily home with them when they were young. I thought at first that I would have to spend several years out of the work place and just try to figure something out when my kids were older. I had no idea that companies such as Metron existed, and I feel so blessed to have found work that is mathematically challenging and family-friendly. I do occasionally think of my academic aspirations with a sigh. I have had to make both professional and personal (read: sleep) sacrifices for my job/family arrangement to work. But what I love most about my work arrangement is that it is mine.

Summer M. Husband
Analyst, Metron, Inc.
Ph.D. Computational and Applied Mathematics,
Rice University 2002
Mother to three boys

Ed. note: This is the first article in what we hope will become a continuing series.

Subsidized Childcare at the JMM

"Love it! And the boys do too!"

The American Mathematical Society and the Mathematical Association of America are pleased to announce that for the fourth year they are offering and significantly subsidizing childcare services at the Joint Mathematics Meetings (JMM)—next in San Diego, CA, January 6–9, 2008. The childcare will be offered to parents through KiddieCorp, an organization that has been providing high quality programs for children of all ages at meetings throughout the U.S. and Canada since 1986.

Parents registered as participants at JMM can take their children for a fun few days and still enjoy the meeting. While attendees are in sessions KiddieCorp will engage children in popular tried and true games and activities including arts & crafts, music & movement, board games, story time, and dramatic play. The program offers theme activities for the older children, specially designed so that children can make friends easily in a comfortable, safe and happy environment.

The feedback on the service is enthusiastic: "Very convenient and useful. I hope it will continue to be offered." "I really appreciated the service." "Wonderful! Please do it again!"

The dates and times for the program are Sunday through Wednesday, January 6–9, 2008, 8:00 a.m. to 5:00 p.m. each day, and it will be located at the San Diego Marriott Hotel. The childcare services provided at the JMM are for children ages 6 months through 12 years old. Space per day will be limited and is on a space available basis. Parents are encouraged to bring snacks and beverages for their children, but items such as juice boxes, cheerios and crackers will be provided. KiddieCorp can arrange meals for children at cost plus 15%, or parents can be responsible for meals for their children.

Registration will be open in September 2007, with deadline of **December 9, 2007**. Availability is limited and handled on a first-come, first-served basis. The registration

fee is $30 per family (nonrefundable), plus $9 per hour per child, $7 per hour per child for graduate students. Full payment is due at the time of registration with KiddieCorp. To learn more about the service, policies regarding cancellation and late child pick-up fees, and to register, go to https://www.kiddiecorp.com/jmmkids.htm or call KiddieCorp at (858) 455-1718 to request a form.

Come to the Joint Mathematics Meetings in San Diego, January 6-9: Meet old and new colleagues, attend sessions, visit the exhibits—and bring your children!

Book Review

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

Every Other Thursday, Ellen Daniell, Yale University Press, New Haven, 2006, ISBN 0-300-11323-4

Reviewer: Leigh Shaw McCue, Aerospace and Ocean Engineering, Virginia Tech, mccue@vt.edu

Every Other Thursday is a treatise on the benefits of peer-mentoring for professional (and personal) success. The book follows the biweekly meetings of a group of extraordinarily successful female scientists occurring over a span of some 25 years. Dubbed "group," the participants discuss issues for allotted periods of time as requested by each individual. Problem solving strategies, encouragement, or simple commiseration are offered up by the group to each individual. As is clear in the text, the group dynamics are tailored to each individual. That is, some individuals/problems require problem solving while others require a nod of understanding. The group is attentive to the needs of each individual and each problem. The lessons taught through the book, while specific to academia, are quite logically generalized to any field and across gender, though those individuals accustomed to being a minority in their chosen field will likely relate most strongly to the group discussed in the book.

The book is organized into the following sections: a general introduction, noting gender statistics in the sciences; a description of the creation and evolution of the group; a discussion of how the group works; suggestions for how to form one's own group; and, in closing, biographies of the highly accomplished group members. The group at the time of book publication included Christine Guthrie, a professor at UC San Francisco and member of the National Academy of Sciences; Ellen Daniell, the author and a UC San Diego Ph.D.; Helen Wittmer, a retired staff member from UC Berkeley; Suzanne McKee, a senior scientist at Smith-Kettlewell and UC Berkeley Ph.D.; Mimi Koehl, a professor at UC Berkeley; Judith Klinman, a professor and former department chair at UC Berkeley; and Carol Gross, professor at UC San Francisco and National Academy of Sciences member. While each member briefly writes of her introduction to group and gives an anecdote, the story is primarily told by Daniell based upon years of collected notes on the evolution of group and discussions amongst the members.

Daniell defines their "group" as being everything from "a forum for professional problem solving" to "a celebration of life" to "solace" (p. 13) and describes how the group is, rather inadvertently, grounded in concepts of "radical psychology." The merits of group are told in a "facing disaster" chapter where Daniell describes her personal experiences being denied tenure and using group as a sounding board for her somewhat nontraditional career decisions post-UCB. This autobiographical chapter serves as a building block for the remainder of the work, wherein lies one of the difficulties in telling this story. Daniell's approach, focusing largely upon her plight and how group was a source of support for her, is no doubt necessary to preserve confidentiality of the group members. Yet my only complaint with the book is that it appears overly focused on the hurdles Ellen Daniell faced as she seemingly still seeks to justify to the world, and herself, her career decisions. Her persistent rationalization of her career trajectory appears to reveal an insecurity that does not do justice to her, her accomplishments, or others who leave the tenure track.

The next chapter, on "Accepting … Liking … Celebrating," is a wonderfully written section on "asking for what one wants, taking credit for achievements, and feeling entitled to success" (p. 71). In a qualitative and passionate manner, based

upon anecdotes of the group members, Daniell makes the case for tooting our own horns, so to speak, and to feel entitled to the success that may befall us.

While many of the topics presented in *Every Other Thursday,* such as work-life balance, the need for affirmation, feeling a need to please others, carrying the burden of trying to be a role model, mentoring and being a mentee, publishing, aging, etc. have been covered in numerous quantitative and qualitative ways, one of the charms of the book is the openness and personal stories contained in the text. The reader relates to the author and her group members. The conversations of group are told in such precise detail that the reader can picture sitting in the room, drinking tea, helping tackle life and academia's issues. This approach provides a firm validation of the power of group work and of how this form of peer mentoring can assist in both personal and professional development.

On a more personal note, I first heard about this book at a peer mentoring workshop on campus last January. The workshop organizers facilitated female faculty, primarily junior faculty, forming field-specific peer support groups to urge each other on towards successful research and publication habits. A small group of us, who had met at that workshop, were interested in regular meetings of an interdisciplinary group to discuss general attitudes towards academia, work-life balance, and other career issues. We met only a handful of times, over lunch near campus, and primarily introduced ourselves and the contrasting expectations of different fields. (I grew substantially less stressed about my publication goals for tenure after hearing about the quantity of publications typically required for biologists!) Our plans and conversations broke quite strongly from both the mold described in the book and that suggested to us at the workshop, though it very much appeared to match our personalities. We even bounced about the idea of writing this review as a group. Unfortunately our group ceased meeting after the tragedy on our campus that April. A glance back through my inbox shows I owe the group a response to an e-mail dated April 13, in which we were planning our next meeting and discussing possibilities for this book review. In retrospect, I feel we needed such a group even more then than ever, and I regret letting the ball drop on maintaining regular meetings. Thus it is my wish, in this review, to strongly encourage interested readers both to read the book and to embrace the concept of "group," in its loosest definition. Consistent with the discussion in *Every Other Thursday,* "group" in whatever form, and however it best serves its members, has the potential for tremendous professional and personal benefits in both times of stability and turmoil. That's all for now, I'm off to send my group a long overdue e-mail.

In Memoriam: John Todd *excerpted from CalTech press release*

John Todd, one of the pioneers of numerical analysis, died Thursday, June 21, at his home in Pasadena, California. He was 96. Thomas A. Tombrello, chair of the Division of Physics, Mathematics, and Astronomy and William R. Kenan, Jr. Professor of Physics at Caltech says, "Jack and his wife Olga were among the pioneers who made us what we are in teaching and research in mathematics. Our sense of collegiality and common purpose are a tribute to them."

"It was a terrific day for the mathematics department when we succeeded in attracting Jack and Olga to come to Caltech," says Gary Lorden, professor of mathematics.

"Not only did we gain eminent scholars, but wonderful colleagues and teachers. They made a remarkably generous commitment to the future of Caltech and the mathematics department, and their legacy also includes the inspiring stories of their lives and careers—Olga, as one of the very first women to make a mark in 20th-century mathematics, and Jack as a pioneer in numerical analysis and computing. These two remarkable people will always be remembered with great affection and regard by mathematicians and the Caltech community."

"Remembering Jack Todd" will appear in a future newsletter, with emphasis on his relationship with and contributions to AWM.

Publications of Interest

Maria Gaetana Agnesi

The World of Maria Gaetana Agnesi, Mathematician of God by Massimo Mazzotti has just been published in the series Johns Hopkins Studies in the History of Mathematics.

Description from the publisher's Web site: She is best known for her curve, the witch of Agnesi, which appears in almost all high school and undergraduate math books. She was a child prodigy who frequented the salon circuit, discussing mathematics, philosophy, history, and music in multiple languages. She wrote one of the first vernacular textbooks on calculus and was appointed chair of mathematics at the university in Bologna. In later years, however, she became a prominent figure within the Catholic Enlightenment, gave up the academic world, and devoted herself to the poor, the sick, the hungry, and the homeless. Indeed, the life of Maria Agnesi reveals a complex and enigmatic figure—one of the most fascinating characters in the history of mathematics. Using newly discovered archival documents, Massimo Mazzotti reconstructs the wide spectrum of Agnesi's social experience and examines her relationships to various traditions—religious, political, social, and mathematical. This meticulous study shows how she and her fellow Enlightenment Catholics modified tradition in an effort to reconcile aspects of modern philosophy and science with traditional morality and theology. Mazzotti's original and provocative investigation is also the first targeted study of the Catholic Enlightenment and its influence on modern science. He argues that Agnesi's life is the perfect lens through which we can gain a greater understanding of mid-eighteenth-century cultural trends in continental Europe.

The Contest for Knowledge: Debates over Women's Learning in Eighteenth-Century Italy was edited and translated by Rebecca Messbarger and Paula Findlen. It was published in 2005 in the University of Chicago Press series The Other Voice in Early Modern Europe.

From the publisher's Web site: At a time when women were generally excluded from scholarly discourse in the intellectual centers of Europe, four extraordinary female *letterate* proved their parity as they lectured in prominent scientific and literary academies and published in respected journals. During the Italian Enlightenment, Maria Gaetana Agnesi, Giuseppa Eleonora Barbapiccola, Diamante Medaglia Faini, and Aretafila Savini de' Rossi were afforded unprecedented deference in academic debates and epitomized the increasing ability of women to influence public discourse.

The Contest for Knowledge reveals how these four women used the methods and themes of their male counterparts to add their voices to the vigorous and prolific debate over the education of women during the eighteenth century. In the texts gathered here, the women discuss the issues they themselves thought most urgent for the equality of women in Italian society specifically and in European culture more broadly. Their thoughts on this important subject reveal how crucial the eighteenth century was in the long history of debates about women in the academy.

Practical Uses of Math and Science

Practical Uses of Math and Science is an online journal of math and science examples for pre-college education. PUMAS is a collection of one-page examples of how math and science topics taught in K–12 classes can be used in interesting settings, including everyday life. The examples are written primarily by scientists and engineers and are available to teachers, students, and other interested parties via the PUMAS Web site, http://pumas.jpl.nasa.gov/. The goal is to capture, for the benefit of pre-college education, the flavor of the vast experience that working scientists have with interesting and practical uses of math and science. Submissions of new examples are welcome.

Careers Basics: Advice and Resources for Scientists

This booklet is available at *Science* Careers Forum. The chapters include: CV writing and interview skills, funding and grant writing, expanding choices, networking, female and minority experiences in science, leadership and management in the lab, and scientific writing and publishing.

The articles in each chapter may be read online, or full chapters or the full booklet may be downloaded in .pdf form. Two of the articles in the chapter on female and minority experiences look particularly relevant: "Women and Minorities: Negotiating Salaries" by Lee Kass and Kathleen Gale, and "Top Five Challenges for Pregnant Scientists" by Lynn Dicks. See http://sciencecareers.sciencemag.org/career_development/tools_resources/careers_basics_booklet.

"Code O": How to recover from Overwhelm

This article by Susan R. Johnson, MD, MS, appears at http://www.mentornet./documents/about/news/newsart.aspx?nid+20&sid=1. Her "three steps to resuscitation" are 1) stop and take a deep breath, 2) slow down, and 3) complete a task. The task need not be complex or high-priority; your first order of business is to get out of under the "overwhelm." Johnson goes on to describe various stabilization techniques, developing a system for staying organized and learning how to manage your time.

The suggestions are full of common sense; they seem unsurprising when you read them, but you're also likely to think, "what a helpful way to put things." They may well give you a new slant on how to recover when you're feeling paralyzed by waaaay too much to do.

Web Sites of Interest

America COMPETES Act of 2007

In the July–August issue, we reported on the science and math bills that had been proposed in the Senate and the House of Representatives and noted that it was expected that the two legislative bodies would agree on compromise legislation and that the President would sign the bill. On August 9, 2007, Bush signed into law The America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education and Science Act (America COMPETES). A full fact sheet from the Office of the Press Secretary, the White House, is available at www.whitehouse.gov/news/releases/2007/08/20070809-6.html.

From that fact sheet: As the President proposed, the act supports doubling funding for basic research programs in physical sciences. This increased funding will encourage scientists to explore promising and critical areas such as nanotechnology, supercomputing, and alternative energy sources. The act authorizes the president's Math Now proposal to improve instruction in mathematics. The programs will give teachers research-based tools and professional development to improve elementary and middle school students' achievement in math. The act authorizes the president's proposed Advanced Placement/International Baccalaureate (AP/IB) Program. This program would expand low-income students' access to AP/IB coursework by training more high school teachers to lead AP/IB courses in math, science, and critical foreign languages in high-need schools.

The Chronicle Careers Section

In conjunction with its job ads, the *Chronicle of Higher Education* has a section called "News & Advice." A listing by date is available at http://chronicle.com/jobs/news/. There are over 100 articles under the topic "Work and Family," almost as many in "Troubleshooting," only 8 on "Retirement." Many other topics are available. From the random surfing I have done at the site, the articles are frank (so much so that many of them have pseudonymous authors) and sensible.

The AAUP Issues Pages

I have more than once printed in these pages press releases from the American Association of University Professors (AAUP). Their website offers information open to all at http://www.aaup.org/aaup/issuesed/default.htm, with topics including "Women in Higher Education" and "Work & Family." Some materials are available to members in *Academe,* the monthly AAUP magazine, with reports available to non-members for a price (a rather hefty $75 for the latest salary report, for example); membership in AAUP is rather expensive but worthwhile, in my opinion. The state and national leadership has been invaluable to us at Loyola as we strive to protect the rights of faculty.

Education Column

Jackie Dewar, Professor of Mathematics and Director of the Center for Teaching Excellence, Loyola Marymount University, Los Angeles, CA

Scholarship of Teaching and Learning: What? and Why Now?

Scholarship of Teaching and Learning (SoTL) has engendered many definitions since Ernest Boyer introduced the phrase "scholarship of teaching" into the vocabulary of higher education in his 1990 book, *Scholarship Reconsidered.*[1] In it, he proposed that colleges and universities require a fresh vision of scholarship in order to tap the full range of faculty talents and to encourage vital connections between the academy and its community. He labeled and described four types of scholarship: discovery, application, integration and teaching. As President of the Carnegie Foundation for the Advancement of Teaching, Boyer brought national and international attention to SoTL, but others[2] had discussed similar concepts before and just after his book.

Recently, Carnegie Senior Scholar Mary Huber and Carnegie Vice President Pat Hutchings[3] have "come to embrace a capacious view of the topic, wanting to draw this movement in the broadest possible terms." They see SoTL ranging from modest investigations that document the teaching and learning in a single classroom, the results of which are shared with others, to studies with elaborate research designs that go well beyond a single classroom. For the purposes of this article, let us think of SoTL as the intellectual work that faculty do when they use their disciplinary knowledge to investigate a question about their students' learning, submit their findings to peer review, and make them public for others in the academy to build upon.

One of the many sources of confusion about the topic and its value to higher education is the need to distinguish between "good teaching," "scholarly teaching" and the "scholarship of teaching and learning." Ronald Smith writes that good (or better) teaching is defined/measured by the quality of student learning, while scholarly teaching requires something more.[4] Scholarly teachers and their teaching must be informed not only by the latest ideas in their field (in the case of most readers of this newsletter that will be one of the mathematical sciences) but by research about instructional design, methods of assessment and student learning and teaching in their field. Scholarly teachers are aware of teaching alternatives and make appropriate choices for their students and their classes. Finally, scholars of teaching and learning are carrying out research on teaching and learning that involves aspects of discovery and integration and is intended to improve practice within and beyond their own classrooms.

The next logical question for those in mathematics to ask is how SoTL in mathematics differs from mathematics education research. This query was addressed in the MAA minicourse, "Beginner's Guide to the Scholarship of Teaching and Learning in Mathematics," co-presented with my colleague Curtis Bennett at the 2006 and 2007 national joint mathematics meetings. In the minicourse, we utilized an equilateral triangle with vertices labeled "teaching tips," "scholarship of teaching and learning," and "mathematics education research" and commented that, as one moves away from describing a teaching method that (you and) your students "liked" and gathers evidence from students that indicates what (cognitive or affective) effect the method had on their learning, one is moving toward scholarship of teaching and learning. As the third vertex of this triangle, mathematics education research fits the most traditional

[1] Ernest L. Boyer, *Scholarship Reconsidered: Priorities of the Professoriate,* Carnegie Foundation for the Advancement of Teaching, Princeton, NJ, 1990.

[2] For example, K.P Cross, "A Proposal to Improve Teaching or What 'Taking Teaching Seriously' Should Mean," *AAHE Bulletin,* September, 1986, pp. 9–14.

[3] Mary Taylor Huber and Pat Hutchings, *The Advancement of Learning: Building the Teaching Commons,* Jossey-Bass, San Francisco, 2005, p. 4.

[4] Ronald Smith, "Formative Evaluation and the Scholarship of Teaching and Learning," *Fresh Approaches to the Evaluation of Teaching.* New Directions for Teaching and Learning, no. 88, Christopher Knapper and Patricia Cranton, editors, Jossey-Bass, San Francisco, 2001.

sense of Boyer's scholarship of discovery wherein research methodologies, theoretical frameworks, empirical studies, reproducible results, etc. command greater importance. This approach, in turn, can influence the questions asked and the methods used to investigate them. Of course, almost no form of scholarship fits neatly into any one camp. Our notion is that there should be big tent whose purpose is to improve the teaching and learning of mathematics as a whole.[5]

In SoTL, just as in mathematics, seeing examples can greatly aid our understanding. Huber and Morreale[6] present examples of SoTL work from a variety of disciplines including mathematics. Here are a few SoTL questions from my own experience and institution:

- How does math majors' understanding of proof evolve as they move through the curriculum?
- What courses or other learning experiences have the greatest effect on the development of their understanding of proof?

- How do K–12 future teachers describe mathematics?
- How does their description compare to that of experts in the field?

- How much can a single course shift their view toward that held by experts?
- How does the additional of a civic engagement component to a math core course influence student learning and attitudes towards mathematics?

In mathematics departments SoTL is not typically viewed as disciplinary research (unless one is trained in mathematics education), so the question naturally arises: By what standards should SoTL work be evaluated? The first significant response to this concern, Scholarship Assessed, states that SoTL is judged by the same criteria as the traditional scholarship of discovery: clear goals, adequate preparation, appropriate methods, significant results, effective presentation, and reflective critique and it suggests a series of questions that help to provide meaningful interpretations for each criterion.[7]

How much colleagues, departments and institutions "count" SoTL varies widely. SoTL is often seen as a nice "add-on" to a record of traditional disciplinary research, especially when the SoTL work is cross- or interdisciplinary. So why bother with SoTL? The landscape of higher education has changed tremendously in the last several decades. Increasingly our student bodies are more diverse, with ever-larger percentages of high school students entering college, continually transforming the generational divide.[8] Technology offers many new options for instruction, and neuroscience has made new discoveries about the physical basis of learning.[9] Each of these has implications for teaching that present numerous opportunities for SoTL investigations. SoTL also offers faculty a means other than student or peer evaluations to document their teaching and their students' learning for merit, tenure and promotion applications. Increasing calls for assessment and greater accountability in higher education present institutions and faculty yet another challenge. By asking and answering SoTL questions like those listed above, we can find out how well we are teaching and our students are learning and we get insights for making improvements. Suddenly SoTL is beginning to sound a lot like assessment. This is because, although they are distinct, SoTL and assessment possess great synergy. Faculty who do SoTL work will develop a mindset that is positively disposed toward assessment. They "get it" that a student's B+ grade in calculus does not tell if or how well the student mastered the desired learning out-

[5] On January 6, 2008 at the joint meetings there will be a Special AMS-MAA Session on the Scholarship of Teaching and Learning in Mathematics that is intended to bring together an array of speakers from a broad range of institutions and backgrounds to present the results of evidence-based investigations into student learning.

[6] Mary Taylor Huber and Sherwin P. Morreale, *Disciplinary Styles in the Scholarship of Teaching and Learning: Exploring Common Ground,* Stylus, Sterling, Virginia, 2002.

[7] Charles E. Glassick, Mary Taylor Huber, and Gene I. Maeroff, *Scholarship Assessed: Evaluation of the Professoriate.* Jossey-Bass, San Francisco, 1997, p.36, Exhibit 2.1.

[8] Beloit College Mindset List, October 4, 2007, http://www.beloit.edu/~pubaff/mindset/.

[9] Robert Leamnson, *Thinking about Teaching and Learning: Developing Habits of Learning with First Year College and University Students,* Stylus, 1999.

comes, especially if the grade is an amalgamation of homework, quizzes and tests. In addition, faculty who ask and attempt to answer SoTL questions have had to gather evidence that goes beyond grades on assignments and tests, and as a result they have probably developed a skill-set that would be useful in assessment. SoTL can strengthen faculty development efforts and lead to involvement either individually or institutionally in a national/international higher education initiative.

At the 2008 joint mathematics meeting another Beginner's Guide minicourse offers mathematics faculty one possible entry point to this work. Kathleen McKinney's book[10] can also serve as a very useful and practical guide. The Carnegie Foundation website[11] provides additional resources and examples of this work. Anyone seeking mentoring for a SoTL project idea might consider applying to the 2008 Carnegie Academy for the Scholarship of Teaching and Learning (CASTL) Summer Institute.[12] Colleges and universities prepared to make a commitment to the scholarship of teaching and learning by exploring the place of such work in their settings can find recognition and support by joining the CASTL Affiliates program.[13] All in all, it seems that SoTL offers great promise in addressing a number of the challenges facing higher education.

[10] Kathleen McKinney, *Enhancing Learning through the Scholarship of Teaching and Learning,* Anker Publishing, Bolton, MA, 2007.

[11] See http://www.carnegiefoundation.org.

[12] See http://www.creighton.edu/CASTL2008.

[13] See http://www.carnegiefoundation.org/programs/sub.asp?key=21&subkey=2039&topkey=21.

AWM Ballot

You will receive an e-mail inviting you to vote electronically (or see www.awm-math.org/ballot.htm); those who prefer may mail this ballot or a copy thereof to AWM, 11240 Waples Mill Road, Suite 200, Fairfax, VA 22030, to be received by December 15, 2008. You must validate your ballot by signing your name on the envelope, or your votes will not be counted.

President-Elect (vote for one):

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IMA

INSTITUTE FOR MATHEMATICS AND ITS APPLICATIONS

University of Minnesota, Minneapolis, Minnesota

Associate Director

The Institute for Mathematics and its Applications (IMA) seeks a person to serve as Associate Director for two years beginning in August 2008.

The IMA is located on the Minneapolis campus of the University of Minnesota. Since its founding in 1982 as the result of a national competition, the IMA has been a major national institute with the mission of fostering interdisciplinary research which links high caliber mathematics with important problems from other disciplines, technology, industry, and society, and of strengthening the talent base engaged in mathematical research applied to or relevant to such problems. The IMA runs visitor programs involving around 1,200 scientists per year, with an annual budget of about $6M. The major source of funding of the IMA is the National Science Foundation which has funded the IMA through 2010. The IMA's many programs and activities are documented at its web site, www.ima.umn.edu.

The Associate Director will work with the Director and Deputy Director, the IMA staff, and program organizers on a variety of IMA activities, especially program implementation, participant applications, publicity and special projects. A successful candidate should have a PhD in mathematics or a related field and a successful record in and broad view of mathematical research, a commitment to the IMA mission, and administrative or organizational experience. The Associate Director will work in the exceptional scientific environment provided by the IMA, and will contribute to shaping the international research agenda. Research activity is compatible with the position, and a visiting faculty position at the University of Minnesota may be arranged if appropriate.

Applicants should send a CV, a statement of their interest in the position and other relevant information not contained in the CV, and have at least three letters of reference sent. All materials should be sent by email to search@ima.umn.edu and inquiries can be directed to the same address. Review of applications will begin on January 14, 2008. Applications will be accepted until the position is filled.

The University of Minnesota is an equal opportunity educator and employer.

The IMA is an NSF funded Institute

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Association for Symbolic Logic
ASL Travel Awards

Student Travel Awards: The 2008 ASL Annual Meeting, 2008 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 2008 ASL Annual Meeting in Irvine, CA, or the 2008 ASL European Summer Meeting in Bern, Switzerland; see below for information about these meetings. Student members of the ASL also may apply for travel grants to other ASL or ASL-sponsored meetings. To be considered for a Travel Award, please (1) send a letter of application, and (2) ask your thesis supervisor to send a brief recommendation letter. The application letter should be brief (preferably one page) and should include: (1) your name; (2) your home institution; (3) your thesis supervisor's name; (4) a one-paragraph description of your studies and work in logic, a*nd, in the case of an ASL student member application to attend an ASL or ASL-sponsored meeting other than the Annual Meeting or European Summer Meeting*, a paragraph indicating why it is important to attend the meeting; (5) your estimate of the travel expenses you will incur; (6) (for citizens or residents of the USA) citizenship or visa status; and (7) (voluntary) indication of your gender and minority status. Women and members of minority groups are strongly encouraged to apply. In addition to funds provided by the ASL, the program of travel grants to the ASL Annual Meeting and the European Summer Meeting is supported by a grant from the US National Science Foundation; NSF funds may be awarded only to students at USA universities and to citizens and permanent residents of the USA. Air travel paid for using NSF funds must be on a US flag carrier. Application by email is encouraged; put "ASL travel application" in the subject line of your message.

For the 2008 ASL Annual Meeting, applications and recommendations should be received before the deadline of December 21, 2007, by the Program Chair: M.C. Laskowski, Department of Mathematics, University of Maryland, College Park, Maryland 20742-4015, USA; Fax: 1-301-314-0827; email: **mcl@math.umd.edu**. Applications by email are preferred.

For the 2008 ASL European Summer Meeting, applications and recommendations should be received before the deadline of March 14, 2008, by the Organizing Committee: Logic Colloquium 2008, Institute of Computer Science and Applied Mathematics, Neubrueckstrasse 10, CH-3012 Bern, Switzerland; email: **lc08@iam.unibe.ch.**

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

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

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

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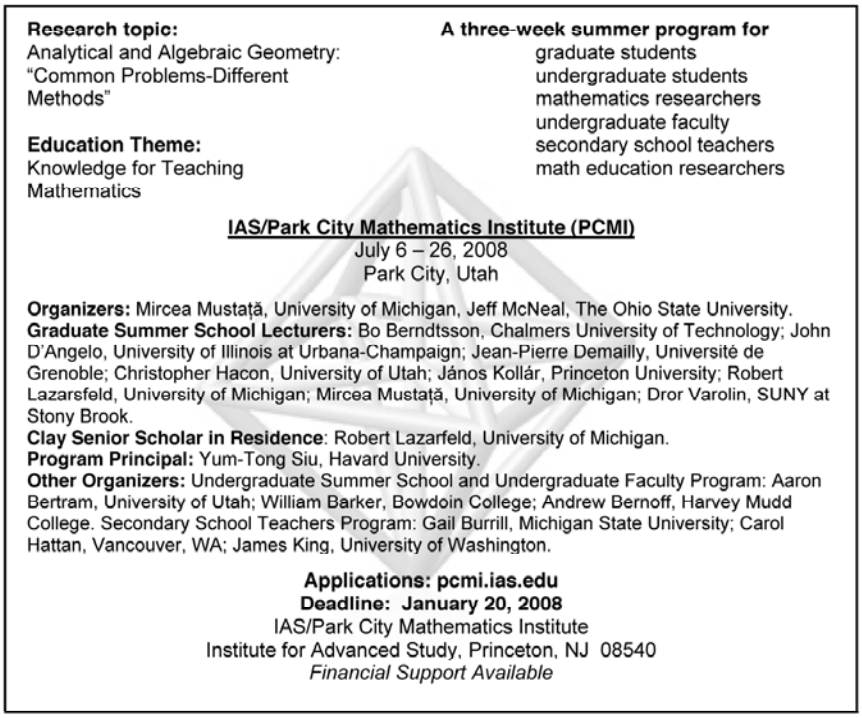
ENHANCING DIVERSITY IN GRADUATE EDUCATION (EDGE) — The EDGE Program was launched in 1998 by Bryn Mawr and Spelman Colleges, with the goal of strengthening the ability of women students to successfully complete graduate programs in the mathematical sciences, with particular inclusion of women from minority groups. The 2008 EDGE Summer Program will be held June 5 – July 2, 2008 at Pomona College in Claremont, CA, with Local Coordinator Dr. Ami Radunskaya. The EDGE Program provides courses in analysis and algebra, a topical minicourse, guest lectures, and advanced graduate student mentors. The Program also provides follow-up academic year mentoring and networking opportunities. Applicants to the EDGE Program must be women who have applied to graduate programs in the mathematical sciences for Fall, 2008. All applicants should have completed standard junior/senior-level undergraduate courses in analysis and abstract algebra expect to earna Ph.D. in the mathematical sciences. Participants are provided travel, room and board, a stipend of $2,000, and a small research fund. Applications should consist of (1) a completed application form; (2) a personal statement; (3) two letters of recommendation from mathematics faculty; (4) a transcript and current resume; and (5) a ranked list of graduate programs to which the applicant has applied. For further details, visit the website at http://www.edgeforwomen.org/. The EDGE Program will be held pending support. Deadline for Applications: **March 3, 2008**. The EDGE Program, P.O. Box 270, Spelman College, Atlanta, GA 30314

AMERICAN UNIVERSITY — Tenure-track Assistant Professor in the Mathematics and Statistics Department at American University, beginning Fall 2008. Qualified candidates will have a strong background in Mathematics or Statistics. Ph.D. and teaching experience required. American University is an EEO/AA employer. Minority and women candidates are encouraged to apply. See math.american.edu/positions, or contact the Department ofMathematics and Statistics at (202) 885-3120 for details.

BROWN UNIVERSITY — The Division of Applied Mathematics at Brown University seeks applicants at the tenured level (Associate or Full Professor) in the general area of dynamical systems. See the Division web site at www.dam.brown.edu for full posting.

BROWN UNIVERSITY — The Division of Applied Mathematics at Brown University seeks applicants at the tenure track at (Assistant Professor) or tenured (Associate Professor) level in the general area of numerical analysis and scientific computing. See the Division web site at www.dam.brown.edu for full posting.

BROWN UNIVERSITY — MATHEMATICS DEPARTMENT — The Mathematics Department at Brown University invites applications for one position at the level of Tenured Associate or Full Professor to begin July 1, 2008 in the area of analysis, broadly construed. [Exceptional candidates with less experience may also be considered for a tenure-track Associate Professor position.] Candidates should have a distinguished research record and a strong commitment to excellence in undergraduate and graduate teaching. Preference will be given to applicants with research interests consonant with those of the present members of the Department. For more information see: http://www.math.brown.edu/faculty/faculty.html. Qualified individuals are invited to send a letter of application and a curriculum vitae to: Senior Search Committee, Department of Mathematics, Box 1917, Brown University, Providence, Rhode Island 02912. Applicants for Full Professor should include the names of five references who would be contacted at the appropriate time by the Search Committee. Applicants for Associate Professor should have three letters of reference sent at the time of application. Applications received by **November 15, 2007** will receive full consideration, but the search will remain open until the position is closed or filled. For further information or inquiries, write to srsearch@math.brown.edu. Brown University is an Equal Opportunity/Affirmative Action employer and encourages applications from women and minorities.



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CASE WESTERN RESERVE UNIVERSITY, Department of Mathematics, 10900 Euclid Avenue, Cleveland, Ohio, 44106-7058 — Tenure-track and temporary positions — Open rank, however appointment at the rank of assistant professor is strongly preferred. Tenure track in area of numerical analysis/scientific computing to enhance Department program. Also NSF funded post-doc in area of functional analysis/convexity. For more information, see http://www.case.edu/artsci/math/employment.htm. The successful tenure-track candidate will hold the Ph.D. or equivalent and have, relative to career stage, a distinguished record of publication, research, service, and teaching. Compensation commensurate with qualifications. Applications will be considered on receipt; applications will be accepted until position is filled. Electronic applications to: James Alexander, math-faculty-position@cwru.edu, consisting of a letter of application, AMS cover sheet, CV, and have three letters of reference sent. CWRU is a recipient of an NSF ADVANCE institutional transformation grant to increase the participation of women in science and engineering. Case Western Reserve University is committed to diversity and is an affirmative action, equal opportunity employer. Applications from women and minorities are especially encouraged.

CLARKSON UNIVERSITY — The Department of Mathematics (www.clarkson.edu/mcs) invites applications for two tenure-track position in applied mathematics starting in August 2008. One position will be filled at the Associate or Full Professor level, the other is expected to be filled at the Assistant Professor level. We are especially interested in candidates with expertise in computational areas of applied mathematics, including statistics, or dynamical systems, but all areas of applied mathematics will be considered. Responsibilities will include teaching undergraduate and graduate level mathematics courses, and directing graduate students. For the assistant professor level, minimum requirements are a Ph.D. in mathematics by the date of appointment, demonstrated excellence in both research potential and teaching ability, and fluency in English. In addition, the candidate should be able to interact with other faculty in the department and the university. For the senior position, research, including a record of funding, and teaching records commensurate with such an appointment will be required. Applications including vita and three reference letters should be submitted to Prof. P.A. Turner, Department of Mathematics and Computer Science, Clarkson University, Potsdam, NY 13699-5815. Completed applications will be reviewed starting immediately. Women and minorities are urged to apply. Clarkson University is an AA/EOE Employer. (Pos. # 13-07, senior, Pos. # 14-07, junior).

COLBY COLLEGE, Mathematics Department — The Department of Mathematics at Colby College invites applications for a one-year sabbatical replacement position in mathematics at the assistant professor or instructor level, beginning September 1, 2008. Ph.D. in mathematics preferred; A.B.D. considered. Five course teaching load. Evidence of exceptional teaching ability is required. The ability to teach a course in the history of mathematics is desirable but not required. Send curriculum vitae, a statement on teaching and research, and three letters of recommendation (all in hard copy) to: Mathematics Search Chair, Department of Mathematics, Colby College, 5830 Mayflower Hill, Waterville, ME 04901. We cannot accept applications in electronic form. Review of applications will begin on January 15, 2008 and will continue until the position is filled. Colby is a highly selective liberal arts college located in central Maine. The college is a three-hour drive north of Boston and has easy access to lakes, skiing, the ocean, and other recreational and cultural activities. For more information about the position and the department, visit our web site at www.colby.edu/math. Colby is an Equal Opportunity/Affirmative Action employer, committed to excellence through diversity, and strongly encourages applications and nominations of persons of color, women, and members of other under-represented groups. For more information about the College, please visit the Colby Web site at www.colby.edu.

COLLEGE OF WILLIAM AND MARY — Tenure-track positions in mathematics department beginning fall 2008. At least two assistant professorships in any part of pure or applied mathematics, and one assistant or associate professorship in statistics, probability, or stochastic OR. Mathematics or statistics PhD required, plus strong scholarly and teaching credentials. Preference for candidates who can interact with existing faculty (see www.math.wm.edu). Online application required; see www.wm.edu/mathematics/position.php for details. Credential review begins 12/01/2007 and continues until positions are filled. There may also be visiting positions. AA/EEO

CORNELL UNIVERSITY — The Cornell University Department of Mathematics seeks applications for the position of Senior Lecturer; full-time; 5-year renewable term appt.; 7/1/2008 – 6/30/2013. This individual would be Coordinator of the Mathematics Department Outreach and K-12 Education Program. We expect this individual to initiate and run activities that bring together mathematics department faculty, Cornell students, and the mathematics education and local K-12 education communities. The individual should have qualifications and expertise to supervise student teachers and to teach mathematics education and undergraduate mathematics courses. To apply electronically, please go to http://www.mathjobs.org, or send three letters of reference and a curriculum vita to Dan Barbasch, Chair, Department of Mathematics, 320A Malott Hall, Cornell University, Ithaca, NY 14853-4201. For information about the Department see: http://www.math.cornell.edu/ Deadline **January 31, 2008**. We hope to make a decision in March. Cornell University is an Affirmative Action/Equal Opportunity Employer and Educator.

COURANT INSTITUTE — Tenure Track Position — The Courant Institute Department of Mathematics anticipates having a small number of faculty positions in mathematics to begin in September 2008. Appointments may be made at either a junior or senior level. These positions will be in a range of areas in computational, applied and pure mathematics; two particular areas of interest are computational statistics and atmosphere ocean science. Some may be multidisciplinary appointments that are joint with a science department from the Faculty of Arts and Sciences. Applications and supporting documents should be received by **January 4, 2008**. For more information please visit http://www.math.nyu.edu/jobs/. The Courant Institute/New York University is an Equal Opportunity/Affirmative Action Employer.

COURANT INSTITUTE — Postdoc Positions — The Courant Institute is a center for advanced training and research in the mathematical sciences. It has long been an international leader in mathematical analysis, differential geometry, probability theory, applied mathematics, and scientific computation, with special emphasis on partial differential equations and their applications. Its scientific activities include an extensive array of research seminars and advanced graduate courses. Each year a limited number of Courant Institute Instructorships in the Department of Mathematics are awarded to postdoctoral scientists. These appointments carry a light teaching load of one course per semester and ordinarily are for a three-year term. These positions are primarily for recent Ph.D.'s and candidates must have a degree in mathematics or some affiliated field. For more information please visit: http://www.math.nyu.edu/visiting_faculty. Applications and supporting documents are due by **December 15, 2007** for appointments to begin the following academic year. The Courant Institute at New York University is an Equal Opportunity/Affirmative Action Employer.

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FAIRFIELD UNIVERSITY — The Department of Mathematics and Computer Science at Fairfield University invites applications for three tenure track assistant professorships, to begin in September 2008. A doctorate in mathematics is required. A solid commitment to teaching, and strong evidence of research potential, are essential. We are looking for (1) one person who will be expected to conduct research with undergraduate students and (2) two people who will be expected to teach some courses in our graduate program. Graduate courses include, but are not limited to, year-long sequences in Abstract and Linear Algebra, Applied Mathematics, Financial Mathematics, Real and Complex Analysis, and Probability and Statistics. In addition, the successful candidates will share a willingness to participate in the university's core curriculum, which includes two semesters of mathematics for all undergraduates. Fairfield University, the Jesuit University of Southern New England, is a comprehensive university with about 3,200 undergraduates and a strong emphasis on liberal arts education. The department offers a BS and an MS in mathematics. The MS program is an evening program and attracts students from various walks of life — secondary school teachers, eventual Ph.D. candidates, and people working in industry, among others. The teaching load is 3 courses/9 credit hours per semester and consists predominantly of courses at the undergraduate level. Fairfield offers competitive salaries and compensation benefits. The picturesque campus is located on Long Island Sound in southwestern Connecticut, about 50 miles from New York City. Fairfield is an Affirmative Action/Equal Opportunity Employer. For further details see http://cs.fairfield.edu/mathhire. Applicants should send a letter of application, a curriculum vitae, teaching and research statements, and three letters of recommendation commenting on the applicant's experience and promise as a teacher and scholar, to Matt Coleman, Chair of the Department of Mathematics and Computer Science, Fairfield University, Fairfield CT 06824-5195. Please indicate in your cover letter the position for which you are applying. Full consideration will be given to complete applications received by **January 15, 2008**. We will be interviewing at the Joint Mathematics Meetings in San Diego, January 6-9. Please let us know if you will be attending.

GEORGIA COLLEGE & STATE UNIVERSITY — Georgia College & State University invites applications for a tenure track Assistant Professor of Mathematics. A Ph.D. in mathematics, statistics, or closely related field is required. Employment will begin August 2008. A review of applications will begin October 19, 2007. For full consideration, applications must be postmarked or electronically submitted at http://www.mathjobs.org/jobs by **November 30, 2007**. Please visit http://www.gcsu.edu/facultyjobs/ for a full position description. Georgia is an Open Records state. The finalist will be required to submit to a background investigation. GCSU is an Equal Opportunity, Affirmative-Action Institution.

HURVEY MUDD COLLEGE — Department of Mathematics — Harvey Mudd College invites applications for a tenure-track position; candidates from all areas of Mathematics and Applied Mathematics, including statistics, biostatistics, mathematical biology and mathematical finance, are encouraged to apply. The rank will be at the assistant or associate professor level. Excellence in teaching is essential, as is evidence of a strong and ongoing research program. Candidates must be willing to supervise undergraduate research, and work with others in departmental programs, such as the industrial projects-based Clinic program. Candidates with a demonstrated success in working with diverse student populations are particularly encouraged to apply. The Mathematics Department at Harvey Mudd College has been recognized nationally as a leader in teaching, research, mentoring undergraduate research, and educational outreach to local high schools. In 2006, the American Mathematical Society recognized the department with its inaugural award for Exemplary Program or Achievement in a Mathematics Department. Harvey Mudd College is a highly selective undergraduate institution of science, engineering and mathematics. A quarter of our students are National Merit Scholars, a fifth are high school valedictorians and one year of high school calculus is required for admission. Each year there are about 40 graduates in mathematics, mathematical biology and mathematics/computer science with roughly half going to graduate school. The College enrolls about 750 students and is a member of the Claremont Colleges consortium, comprising five undergraduate colleges, the Claremont Graduate University, and the Keck Graduate Institute of Applied Life Sciences, forming together an academic community of about 5000 students. There is an active research community of over 50 mathematicians and statisticians in the consortium. Claremont is situated approximately 35 miles east of downtown Los Angeles, at the foot of the San Gabriel mountains. The community is known for its tree-lined streets and village charm. It is an easy drive from Claremont to cultural attractions of the greater Los Angeles area, as well as the ocean, mountains and deserts of Southern California. Strong preference will be given to applications submitted through http://www.mathjobs.org/jobs/. Applicants should submit a cover letter; a curriculum vitae; a synopsis of their current research program; and a teaching portfolio, including a description of their teaching philosophy and experience. They should also arrange to have three letters of recommendation submitted through the mathjobs.org website. Candidates are also welcome to include in the cover letter a statement about their personal efforts working in and promoting diverse academic environments. Further information about the college and department may be found at http://www.math.hmc.edu/. Preference will be given to applications completed by December 10, 2007. Harvey Mudd College is an equal opportunity employer and is committed to the recruitment of candidates historically underrepresented on college faculties. Experience with or demonstrated ability to effectively teach students from diverse backgrounds will be considered among the criteria for appointment.

JOHNS HOPKINS UNIVERSITY — Two non-tenure-track J.J. Sylvester Assistant Professors for the 2008-2009 academic year — Subject to availability of resources and administrative approval, the Department of Mathematics solicits applications for two non-tenure-track J.J. Sylvester Assistant Professors for the 2008-2009 academic year. 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, and should include a vita, at least four letters of recommendation of which one concerns teaching, and a description of current and planned research. Write to math@math.jhu.edu for questions concerning these positions. Applications received by **November 16, 2007** will be given priority. The Johns Hopkins University is an Affirmative Action/Equal Opportunity Employer. Minorities and women candidates are encouraged to apply.

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JOHNS HOPKINS UNIVERSITY — Two Tenure-track Assistant Professors for the 2008-2009 academic year — Subject to availability of resources and administrative approval, the Department of Mathematics solicits applications for two Tenure-track Assistant Professors for the 2008-2009 academic year. The Assistant Professorship is a three-year position. 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, and should include a vita, at least four letters of recommendation of which one concerns teaching, and a description of current and planned research. Write to math@math.jhu.edu for questions concerning these positions. Applications received by **November 16, 2007** will be given priority. The Johns Hopkins University is an Affirmative Action/Equal Opportunity Employer. Minorities and women candidates are encouraged to apply.

KANSAS STATE UNIVERSITY — Department of Mathematics — Subject to budgetary approval, applications are invited for tenure-track positions at the Assistant Professor rank; positions commence August 10, 2008, with salary commensurate with qualifications. A Ph.D. in mathematics is required and preference will be given to candidates with some postdoctoral experience. The Department seeks candidates whose research interests mesh well with current faculty. The Department has research groups in the areas of algebra, analysis, differential equations, geometry/topology, and number theory. Successful candidates should have strong research credentials as well as strong accomplishment or promise in teaching and should demonstrate a strong commitment to mentoring students, and to serving a diverse population. Applicants must submit the following: a letter of application, curriculum vita, outline of teaching philosophy, and a statement of research objectives. Four letters of reference, at least one of which addresses the applicant's teaching ability and potential, should be sent to: Louis Pigno, Department of Mathematics, Cardwell Hall 138, Kansas State University, Manhattan, KS 66506. Offers may begin by December 1, 2007, but applications for positions will be reviewed until **February 1, 2008**, or until positions are closed. Kansas State University is an equal opportunity employer and actively seeks diversity among its employees.

KANSAS STATE UNIVERSITY — Department of Mathematics — Subject to budgetary approval, applications are invited for one or more visiting Assistant Professorships commencing August 10, 2008. These will be annual appointments with the possibility of two subsequent one-year appointments depending on performance, funding and need for services. A Ph.D. in mathematics or a Ph.D. dissertation accepted with only formalities to be completed is required by the time of appointment. The Department seeks candidates whose research interests mesh well with current faculty. The Department has research groups in the areas of algebra, analysis, differential equations, geometry/topology, and number theory. Preference will be given to candidates with strong research credentials who have a strong commitment to and demonstrable excellence in teaching undergraduate and graduate courses, mentoring students, and to serving a diverse population. Successful candidate(s) will be expected to participate in the Department's REU and graduate research program. Applicants must submit the following: a letter of application, curriculum vita, outline of teaching philosophy, and a statement of research objectives. Four letters of reference, at least one of which addresses the applicant's teaching ability, should be sent to: Louis Pigno, Department of Mathematics, Cardwell Hall 138, Kansas State University, Manhattan, KS 66506. Applications will be reviewed beginning **December 1, 2007**, and continue until positions are closed. Kansas State University is an equal opportunity employer and actively seeks diversity among its employees.

LOYOLA MARYMOUNT UNIVERSITY — The Mathematics Department of Loyola Marymount University will have at least one tenure-track opening at the assistant professor level for the academic year 2008-2009. Responsibilities include teaching, advising, maintaining an active program of scholarship, and engaging in university service. Applicants are expected to have completed a Ph.D. in mathematics, statistics, mathematics education, or a related field by Fall 2008. Individuals working in any area of mathematics are invited to apply; the department is especially interested in applicants in the areas of mathematics education or K-12 teacher preparation, applied mathematics, and probability/statistics. The University and the Mathematics Department have a strong commitment to cultural and ethnic diversity within the faculty and student body. Applicants who have experience or interest in this area are asked to highlight it in their application. The Mathematics Department, housed within the Loyola Marymount University's College of Science and Engineering, is a community of 18 full-time faculty members and approximately 45 mathematics majors, 25 minors, and a few Master in Arts of Teaching students. Undergraduate degrees are offered in pure mathematics, applied mathematics, and mathematics education. A degree in bio-mathematics is currently being developed. Faculty in the department work in many areas of mathematics in an atmosphere of mutual respect and collegiality. The normal teaching load is 3 courses each semester (9 hours/week). Additional information about the LMU Mathematics Department is available online at http://cse.lmu.edu/mathematics. Salary and other benefits are competitive and commensurate with background and experience. Housing assistance and domestic partner benefits are available. Loyola Marymount, founded in 1911, is a comprehensive university in the mainstream of American Catholic higher education. Located on the west side of Los Angeles overlooking the Pacific, LMU is one of the nation's 28 Jesuit colleges and universities and five Marymount institutions. It serves 5400 undergraduates and over 2500 graduate students in the Colleges/Schools of Liberal Arts, Science and Engineering, Business Administration, Communication and Fine Arts, Film and Television, Education, and Law. Loyola Marymount seeks professionally outstanding applicants who value its mission and share its commitment to academic excellence, the education of the whole person, and the building of a just society. LMU is an equal opportunity institution actively working to promote an intercultural learning community. Women and minorities are encouraged to apply. (Visit www.lmu.edu for more information.) A complete application consists of a letter of interest, curriculum vitae, statement on teaching philosophy, a description of the applicant's current scholarship program, and three letters of recommendation at least one of which addresses the applicant's teaching. We will begin screening applications on **December 3, 2007**. Applicants who will be attending the 2008 Joint Mathematics Meetings in January should indicate this in their letter of interest. Please send application materials to Curtis Bennett, Chair, Attn: Hiring Committee, Mathematics Department, Loyola Marymount University, 1 LMU Drive, Suite 2700, Los Angeles, CA 90045-2659.

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MASSACHUSETTS INSTITUTE OF TECHNOLOGY, DEPARTMENT OF MATHEMATICS — Assistant Professor — The Mathematics Department at MIT is seeking to fill positions at the level of Assistant Professor or higher for September 2008. Appointments are based on exceptional research contributions in pure mathematics. Appointees will be expected to fulfill teaching duties and pursue their own research program. We request that applications and other materials, including (a) curriculum vitae, (b) research description, and (c) three letters of recommendation, be submitted online at www.mathjobs.org. Applications should be complete by **December 1, 2007** to receive full consideration. We request that your letters of reference be submitted by the reviewers online via mathjobs. We will also accept recommendations either as PDF attachments sent to kimm@math.mit.edu, or as paper copies mailed to: Pure Mathematics Committee, Room 2-263, Department of Mathematics, MIT, 77 Massachusetts Ave., Cambridge, MA 02139-4307. Please do not mail or email duplicates of items already submitted via mathjobs. MIT is an Equal Opportunity, Affirmative Action Employer.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, DEPARTMENT OF MATHEMATICS — C.L.E. Moore Instructorships in Mathematics — These positions for September 2008 are open to mathematicians who show definite promise in research. Appointees will be expected to fulfill teaching duties and pursue their own research program. We request that applications and other materials, including (a) curriculum vitae, (b) research description, and (c) three letters of recommendation, be submitted online at www.mathjobs.org. Applications should be complete by December 1, 2007 to receive full consideration. We request that your letters of reference be submitted by the reviewers online via mathjobs. We will also accept recommendations either as PDF attachments sent to kimm@math.mit.edu, or as paper copies mailed to: Pure Mathematics Committee, Room 2-263, Department of Mathematics, MIT, 77 Massachusetts Ave., Cambridge, MA 02139-4307. Please do not mail or email duplicates of items already submitted via mathjobs. MIT is an Equal Opportunity, Affirmative Action Employer.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, DEPARTMENT OF MATHEMATICS — Instructor, Assistant Professor or higher — The applied mathematics group at MIT is seeking to fill combined teaching and research positions at the level of Instructor, Assistant Professor or higher, beginning September 2008. Appointments are mainly based on exceptional research qualifications. Candidates in all areas of applied mathematics, including physical applied mathematics, computational molecular biology, numerical analysis, scientific computation, and theoretical computer science will be considered. Current activities of the group include: combinatorics, operations research, theory of algorithms, numerical analysis, astrophysics, condensed matter physics, computational physics, fluid dynamics, geophysics, nonlinear waves, theoretical and computational molecular biology, material sciences, quantum computing and quantum field theory, but new hiring may involve other areas as well. We request that applications and other materials, including (a) curriculum vitae, (b) research description, and (c) three letters of recommendation, be submitted online at www.mathjobs.org, and preferably well in advance of our deadline of **January 1, 2008** since we will begin our deliberations in December. We request that your letters of reference be submitted by the reviewers online via mathjobs. We will also accept recommendations either as PDF attachments sent to applied@math.mit.edu, or as paper copies mailed to: Applied Mathematics Committee, Room 2-345, Department of Mathematics, MIT, 77 Massachusetts Ave., Cambridge, MA 02139-4307. Please do not mail or email duplicates of items already submitted via mathjobs. MIT is an Equal Opportunity, Affirmative Action Employer.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, DEPARTMENT OF MATHEMATICS — Instructor, Assistant Professor or higher in Statistics and Applied Probablity — The Department of Mathematics at MIT is seeking to fill combined teaching and research positions at the level of Instructor, Assistant Professor or higher in STATISTICS or APPLIED PROBABILITY beginning September 2008. Appointments are mainly based on exceptional research qualifications. We request that applications and other materials, including (a) curriculum vitae, (b) research description, and (c) three letters of recommendations, be submitted online at www.mathjobs.org. Applications should be complete by January 1, 2008 to receive full consideration. We request that your letters of reference be submitted by the reviewers online via mathjobs. We will also accept recommendations either as PDF attachments sent to kimm@math.mit.edu, or as paper copies mailed to: Committee on Statistics, Room 2-263, Department of Mathematics, MIT, 77 Massachusetts Ave., Cambridge, MA 02139-4307. Please do not mail or email duplicates of items already submitted via mathjobs. MIT is an Equal Opportunity, Affirmative Action Employer.

MERCER UNIVERSITY, Macon, GA — Assistant Professor, Mathematics — The Department of Mathematics at Mercer University invites applications for two positions at the level of Assistant Professor of Mathematics to begin August 2008. A Ph.D. in mathematics from an accredited university/college is required. Duties include teaching 21 semester hours per year — usually 6 courses — plus departmental duties as assigned by the Chair and college duties as assigned by the Dean. The successful candidate will show potential for excellence in teaching mathematics at a liberal arts college, show potential for ongoing scholarship, and demonstrate an ability to contribute to the development of programs in the department (e.g., curriculum development and undergraduate research). A lively interest in teaching an interdisciplinary course outside of the department will be considered a plus in evaluating candidates. For full description and to apply online, please access www.mercerjobs.com. AA/EOE/ADA.

MILLS COLLEGE — Assistant Professor of Mathematics — Mills College invites applications for a full-time, tenure-track position at the rank of Assistant Professor to teach a variety of courses in mathematics, beginning Fall 2008. The successful candidate will carry a teaching load equivalent of five courses per year, contribute to an environment that excites women about mathematics and prepares them for careers that use mathematics, and assist in efforts to attract and retain students with diverse backgrounds and interests to the mathematics program. Required: Ph.D. in mathematics and a broad background in mathematics. Applicants must submit evidence of superior teaching and research abilities and a strong interest in advancing women in mathematics in a liberal arts college setting. Mills offers 41 undergraduate majors and 23 graduate degree and certificate programs, including a master's program in interdisciplinary computer science, and a B.A./M.A. program in mathematics. The faculty/student ratio is 1:11. Please send a vita; three letters of recommendation; and statements of teaching philosophy, research agenda, and interest in advancing women in mathematics in a liberal arts college setting to: Dr. Barbara Li Santi, Chair of the Mathematics Search Committee, Mills College, 5000 MacArthur Blvd., Oakland, CA 94613 (e-mail address: barbara@mills.edu). The deadline for receiving this material is **December 17, 2007**. Located in the San Francisco Bay Area, Mills College is a selective liberal arts college for women with co-educational graduate programs (see www.mills.edu). Persons of color and those committed to working in a multicultural environment are encouraged to apply. AA/EOE.

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NORTH CAROLINA STATE UNIVERSITY, Department of Mathematics — Applications are invited for one tenure track assistant professorship beginning Fall 2008. We are seeking an exceptionally well-qualified individual with research interests compatible with those in the department. All areas of pure and applied mathematics will be considered. Candidates must have a PhD in the mathematical sciences, an outstanding research program, a commitment to effective teaching at the undergraduate and graduate levels and demonstrated potential for excellence in both research and teaching. She or he will likely have had successful post-doctoral experience. The Department of Mathematics has strong research programs in both pure and applied mathematics. Many members of the department participate in interdisciplinary programs and research groups on campus and in the broader Research Triangle community. More information about the department can be found at http://www.math.ncsu.edu. To submit your application materials, go to www.mathjobs.org/jobs/ncsu. Include a vita, at least three letters of recommendation, and a description of current and planned research. You will then be given instructions to go to http://jobs.ncsu.edu/applicants/Central?quickFind=77885 and complete a Faculty Profile for the position. Write to math-jobs@math.ncsu.edu for questions concerning this position. NC State University is an Equal Opportunity and Affirmative Action Employer. In addition, NC State welcomes all persons without regard to sexual orientation. The College of Physical and Mathematical sciences welcomes the opportunity to work with candidates to identify suitable employment opportunities for spouses or partners. Applications received by **December 15, 2007** will be given priority.

NORTH CAROLINA STATE UNIVERSITY, Department of Mathematics — Applications are invited for a tenure track assistant professorship in the area of partial differential equations beginning Fall 2008. Candidates must have a PhD in the mathematical sciences, an outstanding research program, a commitment to effective teaching at the undergraduate and graduate levels and demonstrated potential for excellence in both research and teaching. The Department of Mathematics has strong research programs in both pure and applied mathematics. Many members of the department participate in interdisciplinary programs and research groups on campus and in the broader Research Triangle community. More information about the department can be found at http://www.math.ncsu.edu. To submit your application materials, go to www.mathjobs.org/jobs/ncsu. Include a vita, at least three letters of recommendation, and a description of current and planned research. You will then be given instructions to go to http://jobs.ncsu.edu/applicants/Central?quickFind=77889 and complete a Faculty Profile for the position. Write to math-jobs@math.ncsu.edu for questions concerning this position. NC State University is an Equal Opportunity and Affirmative. Action Employer. In addition, NC State welcomes all persons without regard to sexual orientation. The College of Physical and Mathematical Sciences welcomes the opportunity to work with candidates to identify suitable employment opportunities for spouses or partners. Applications received by **December 15, 2007** will be given priority.

PURDUE UNIVERSITY — The Mathematics Department at Purdue University seeks to fill a position in mathematics education. The position will include a minority appointment in the Department of Curriculum and Instruction. Applicants should have either a Ph.D. in mathematics, or a Ph.D. in mathematics education and a master's degree in mathematics.This job opening is part of an ongoing effort by the College of Science to invest in all areas of science education. It is also part of a plan by the Department of Curriculum and Instruction to expand its group in mathematics education. Applications should be submitted online through http://www.mathjobs.org and should include (1) the AMS cover sheet for academic employment, (2) a curriculum vitae, (3) a research description, and (4) three letters of recommendation, one of which discusses the candidate's teaching qualifications. Reference letter writers should be asked to submit their letters online through www.mathjobs.org. Direct all inquiries to goeke@math.purdue.edu. Screening of applications will begin **November 1, 2007**. The university is supportive of the professional needs of dual career couples. For more information about our department, see www.math.purdue.edu/. Purdue University is an Equal Opportunity/Equal Access/ Affirmative Action Employer.

PURDUE UNIVERSITY — Faculty Positions in Statistics — The Department of Statistics at Purdue University invites applications in all areas of statistics and probability for tenure-track positions beginning August 2008. A number of positions are available at the Assistant Professor level; senior positions will be considered for highly qualified applicants. Additional positions are available for candidates also in applications areas designated in COALESCE II, a College of Science-wide multidisciplinary hiring effort. Two separate COALESCE II positions in Statistics are available, one with applications in the social sciences, and one with applications in applied mathematics. The Department of Statistics offers a stimulating and nurturing academic environment. More than thirty tenured and tenure-track faculty members direct research programs in a broad range of areas. Further information about the department is available at: http://www.stat.purdue.edu. All applicants should hold a PhD in Statistics, or a related field, be committed to excellence in teaching, and have demonstrated strong potential for excellence in research. Salary and benefits are highly competitive. Applicants matching one search may be considered in other relevant searches when appropriate. Review of applications will begin on **December 1, 2007**, and will continue until the positions are filled. For all positions in Statistics, please visit http://www.stat.purdue.edu/hiring/ to apply. Purdue University is an Equal Opportunity/Equal Access/Affirmative Action employer fully committed to achieving a diverse workforce.

SYRACUSE UNIVERSITY, Department of Mathematics — The department seeks to fill a position in analysis beginning August, 2008. Ph.D. in mathematics required. Senior level candidates should have a record of outstanding accomplishment and potential in both research and teaching. Junior level candidates should have a record of strong accomplishment and potential in both research and teaching. Applicants from all areas of analysis will be considered, but those whose interests overlap with or interact with geometry, topology, probability, or dynamics are particularly encouraged to apply. Areas of analysis presently represented in the department include real analysis, PDE, several complex variables, and probability. Applications should include a cover letter, CV, three letters of recommendation addressing research qualifications, and at least one letter of recommendation addressing teaching. Send applications to Analysis Search Committee, Mathematics Department, Syracuse University, Syracuse, NY 13244-1150. Screening of senior level candidates is ongoing. Screening of junior level candidates begins **November 15, 2007** and continues until the position is filled. Syracuse University is an Equal Opportunity/Affirmative Action Employer committed to fostering a diverse faculty; women and minority candidates are especially encouraged to apply.

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TEXAS A&M UNIVERSITY, The Department of Mathematics — The Department of Mathematics anticipates several openings for tenured, tenure-eligible, and visiting faculty positions beginning fall 2008. The field is open, but we particularly seek applications from individuals whose mathematical interests would augment and build upon existing strengths both within the Mathematics Department as well as other departments in the University. Salary, teaching loads and start-up funds are competitive. For a Tenured Position the applicant should have an outstanding research reputation and would be expected to fill a leadership role in the department. An established research program, including success in attracting external funding and supervision of graduate students, and a demonstrated ability and interest in teaching are required. Informal inquiries are welcome. For an Assistant Professorship, we seek strong research potential and evidence of excellence in teaching. Research productivity beyond the doctoral dissertation will normally be expected. We also have several visiting positions available. Our Visiting Assistant Professor positions are for a three year period and carry a three course per year teaching load. They are intended for those who have recently received their Ph.D. and preference will be given to mathematicians whose research interests are close to those of our regular faculty members. Senior Visiting Positions may be for a semester or one year period. The complete dossier should be received by **December 15, 2007**. Early applications are encouraged since the department will start the review process in October, 2007.
Applicants should send the completed "AMS Application Cover Sheet," a vita, and arrange to have letters of recommendation sent to: Faculty Hiring, Department of Mathematics, Texas A&M University, College Station, Texas 77843-3368. Further information can be obtained from: http://www.math.tamu.edu/hiring. Texas A&M University is an equal opportunity employer. The University is dedicated to the goal of building a culturally diverse and pluralistic faculty and staff committed to teaching and working in a multicultural environment and strongly encourages applications from women, minorities, individuals with disabilities, and veterans. The University is responsive to the needs of dual career couples.

TEXAS A&M UNIVERSITY — QATAR, The Department of Mathematics — The Department of Mathematics expects to have several open positions at Texas A&M University's affiliate campus in Doha, State of Qatar (which is in the Middle East, next to Saudi Arabia). Texas A&M University at Qatar (TAMUQ) is a partnership with Qatar Foundation. Now entering its fifth year of operation, TAMUQ offers Bachelor of Science degrees in Chemical, Electrical and Computer, Mechanical, and Petroleum Engineering. The degree programs are identical to those of the main campus at College Station, Texas. A Texas A&M University diploma is awarded to graduates. A new, state-of-the-art engineering building for teaching and research has recently opened. General information about TAMUQ is available at their web site http://www.qatar.tamu.edu/. The Mathematics faculty provides classes in calculus, differential equations, linear algebra, numerical methods, mathematical modeling and other related coursework, all of which form an integral part of the engineering curricula. Teaching loads are kept low (approximately two or three small classes per academic year) to promote teacher-student mentoring and to allow time for faculty to pursue research. Any level of appointment will be considered depending on the qualifications of the applicant. It is anticipated that most appointments will be non-tenure accruing, with an initial appointment period of one year, which is renewable for additional years, subject to satisfactory performance. A Ph.D. degree is required for all professorial level appointments (the equivalent of an assistant professor or higher). Applicants with a masters degree and teaching experience will be considered for non-professorial positions (e.g. lecturer) for more elementary instruction (and a higher teaching load). Salary rates are competitive and, in general, average 30% higher than comparable salary rates of similar positions in the US. In addition, summer funding is guaranteed. Liberal allowances for professional travel and for relocation to Qatar are provided. Fringe benefits include free furnished housing in one of several gated communities, K-12 education for dependents, group health insurance, annual leave allowance, and a car allowance. Applicants should send the completed "AMS Application Cover Sheet", a vita, and arrange to have at least three letters of recommendation sent to: TAMU-Qatar-Faculty Hiring, Department of Mathematics, Texas A&M University, College Station, Texas 77843-3368. Further information and a link to our on-line application form is available at http://www.math.tamu.edu. At least one recommendation letter should address the candidate's teaching qualifications. The complete dossier should be received by January 15, 2008. Early applications are encouraged since applications will be reviewed as they are received. 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.

THE UNIVERSITY OF OKLAHOMA, Department of Mathematics — Applications are invited for one full-time, tenure-track position in mathematics beginning 16 August 2008. The position(s) is initially budgeted at the assistant professor level, but an appointment at the associate professor level may be possible for an exceptional candidate with qualifications and experience appropriate to that rank. Normal duties consist of teaching two courses per semester, conducting research, and rendering service to the Department, University, and profession at a level appropriate to the faculty member's experience. The position(s) requires an earned doctorate and research interests that are compatible with those of the existing faculty; preference will be given to applicants with potential or demonstrated excellence in research and prior successful undergraduate teaching experience. Salary and benefits are competitive. For full consideration, applicants should send a completed AMS cover sheet, curriculum vitae, a description of current and planned research, and have three letters of recommendation (at least one of which must address the applicant's teaching experience and proficiency) sent to: Search Committee, Department of Mathematics, The University of Oklahoma, 601 Elm, PHSC 423, Norman, OK 73019-0315. Phone: 405-325-6711; FAX: 405-325-7484; E-mail: search@math.ou.edu. *Applications may also be submitted online through http://mathjobs.org. Screening of applications will begin on **December 15, 2007** and will continue until the position(s) is filled. The University of Oklahoma is an Equal Opportunity/Affirmative Action Employer. Women and Minorities are Encouraged to Apply.

THE UNIVERSITY OF TENNESSEE — The Department of Mathematics of The University of Tennessee seeks to fill one tenure-track assistant professor position in Differential Geometry, including: geometric analysis, Riemannian geometry, geometric variational problems and related evolution equations. A Ph.D. is required. Some postdoctoral experience is desirable, though not required. Substantial research promise and dedication to excellent teaching are paramount. Employment begins August 1, 2008. Applicants should arrange to have a vita, at least three reference letters, a research statement (including future plans and abstracts of finished papers), and evidence of quality teaching mailed to Differential Geometry Search, Department of Mathematics, The University of Tennessee, Knoxville, TN 37996-1300. Electronic application materials will not be accepted. Use of the AMS application form is appreciated. Review of applications will begin **December 1, 2007** and will continue until the position is filled. Please see our website www.math.utk.edu for information about the department. The University of Tennessee is an EEO/AA/Title VI/Title IX/Section 504/ADA/ADEA institution in the provision of its education and employment programs and services. All qualified applicants will receive equal consideration for employment without regard to race, color, national origin, religion, sex, pregnancy, marital status, sexual orientation, age, physical or mental disability, or covered veteran status.

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THE UNIVERSITY OF TEXAS AT AUSTIN, DEPARTMENT OF MATHEMATICS, Austin, TX 78712 — Expected openings for Fall 2008 include: (a) Instructorships, some that have R.H. Bing Faculty Fellowships attached to them, and (b) possibly two or more positions at the tenure-track/tenure level. (a) Instructorships at The University of Texas at Austin are postdoctoral appointments, renewable for two additional years. It is assumed that applicants for Instructorships will have completed all Ph.D. requirements by August 18, 2008. Other factors being equal, preference will be given to those whose doctorates were conferred in 2007 or 2008. Candidates should show superior research ability and have a strong commitment to teaching. Consideration will be given only to persons whose research interests have some overlap with those of the permanent faculty. Duties consist of teaching undergraduate or graduate courses and conducting independent research. The projected salary is $43,000 for the nine-month academic year. Each R.H. Bing Fellow holds an Instructorship in the Mathematics Department, with a teaching load of two courses in one semester and one course in the other. The combined Instructorship-Fellowship stipend for nine-months is $52,000, which is supplemented by a travel allowance of $1,000. Pending satisfactory performance of teaching duties, the Fellowship can be renewed for two additional years. Applicants must show outstanding promise in research. Bing Fellowship applicants will automatically be considered for other departmental openings at the postdoctoral level, so a separate application for such a position is unnecessary. Those wishing to apply for Instructor positions are asked to send a vita and a brief research summary to the above address c/o Instructor Committee. Transmission of the preceding items via the internet (URL: https://www.ma.utexas.edu/jobs/application) is encouraged. (b) An applicant for a tenure-track or tenured position must present a record of exceptional achievement in her or his research area and must demonstrate a proficiency at teaching. In addition to the duties indicated above for Instructors, such an appointment will typically entail the supervision of M.A or Ph.D. students. The salary will be commensurate with the level at which the position is filled and the qualifications of the person who fills it. Those wishing to apply for tenure-track/tenured positions are asked to send a vita and a brief research summary to the above address, c/o Recruiting Committee. Transmission of the preceding items via the internet (URL: https://www.ma.utexas.edu/jobs/application/TenureTrack) is encouraged. All applications must be supported by three or more letters of recommendation, at least one of which speaks to the applicant's teaching credentials. The screening of applications will begin on **December 1, 2007**. Background check will be conducted on the applicant selected. The University of Texas at Austin is an Affirmative Action/Equal Opportunity Employer.

TUFTS UNIVERSITY, DEPARTMENT OF MATHEMATICS — Tenure-Track Assistant Professorship in Geometry and Dynamics — Applications are invited for a tenure-track Assistant Professorship to begin September 1, 2008. Applicants must show promise of outstanding research in the area of Geometry and Dynamics, that is, the study of dynamical aspects of geometric problems or applications of dynamical systems to geometry. Possible specialties include, but are not limited to, actions of the mapping-class group, Teichmüller flows, geodesic flows in nonpositive curvature, dynamics or rigidity of group actions, dynamics on the boundary at infinity. Preference will be given to candidates whose interests bridge those of Tufts faculty in Geometric Group Theory, Topology and Dynamical Systems. Applicants must also show evidence of excellent teaching. The teaching load will be two courses per semester. Applications should include a cover letter, curriculum vitae, a research statement and a teaching statement. All of these documents should be submitted electronically through http://www.mathjobs.org. In addition, applicants should arrange for three letters of recommendation to be submitted electronically on their behalf through http://www.mathjobs.org. If a recommender cannot submit online, we will also accept signed PDF attachments sent to Boris.Hasselblatt@tufts.edu or paper letters mailed to GD Search Committee Chair, Department of Mathematics, 503 Boston Avenue, Tufts University, Medford, MA 02155. Review of applications will begin on **January 11, 2008** and will continue until the position is filled. Tufts University is an Affirmative Action / Equal Opportunity employer. We are committed to increasing the diversity of our faculty. Members of underrepresented groups are strongly encouraged to apply.

UNIVERSITY AT BUFFALO, SUNY — The Department of Mathematics anticipates the appointment of several tenure-track assistant professors, effective August, 2008. Salary will be competitive. We seek candidates in the field of Applied Mathematics, particularly with an interest in scientific computing, modeling and simulation, applied probability and stochastic processes. Applicants should have excellent research accomplishments and potential, a Ph.D. in the mathematical sciences and a strong commitment to teaching. A complete application consists of: electronic application, a curriculum vitae and a statement of research interests. These materials can be electronically submitted through the following link: https://www.ubjobs.buffalo.edu/applicants/jsp/shared/frameset/Frameset.jsp?time=1188313507684. Four letters of recommendation can be mailed under separate cover to the following address: Search Committee, Department of Mathematics, University at Buffalo, SUNY, Mathematics Building 244, Buffalo, NY 14260-2900. The deadline for applications is **December 1, 2007**. No paper applications will be accepted. The University at Buffalo is an Equal Opportunity Employer/Recruiter. We are interested in identifying prospective minority and women candidates. No person, in whatever relationship with the University at Buffalo, shall be subject to discrimination on the basis of age, color, creed, handicap, marital status, national origin, race, religion, sex, sexual orientation or veteran status.

UNIVERSITY OF ALABAMA AT BIRMINGHAM — The Department of Mathematics at the University of Alabama at Birmingham (UAB) is soliciting applications for a tenure-track assistant professor position beginning August 15, 2008. Applicants whose research is compatible with the department's strengths in differential equations, differential geometry, dynamical systems, mathematical physics, and topology, including computational aspects of these areas, are encouraged to apply. Those with expertise in geometric or harmonic analysis, inverse problems, or probability are of particular interest in this search. For additional information about the department please visit http://www.math.uab.edu. Applicants should have demonstrated the potential to excel in one of these areas and in teaching at all levels of instruction. They should also be committed to professional service including departmental service. Post-doc experience is preferred. Applications should include a curriculum vita with a publication list, a statement of future research plans, a statement on teaching experience and philosophy, and minimally three letters of reference with at least one letter addressing teaching experience and ability. We prefer applications and all other materials be submitted electronically at http://www.mathjobs.org, although applicants may submit an application including an AMS cover sheet to: Math Faculty Search, Department of Mathematics, The University of Alabama at Birmingham, Birmingham, AL 35294-1170. The department and university are committed to building a culturally diverse workforce and strongly encourage applications from women and individuals from underrepresented groups. UAB has an active NSF-supported ADVANCE program and a Spouse Relocation Program to assist in the needs of dual career couples. UAB is an Affirmative Action/Equal Employment Opportunity employer.

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UNIVERSITY OF CALIFORNIA, DAVIS — Faculty Positions in Mathematics — The Department of Mathematics at the University of California, Davis, is soliciting applications for three tenure-track assistant professor positions starting July 1, 2008. For the tenure-track positions, the department has identified the following priority areas: Mathematical Physics, Optimization, Mathematical Finance, and Probability, but outstanding candidates in all areas of mathematics may be considered. Minimum qualifications for these positions include a Ph.D. degree or its equivalent in the Mathematical Sciences and great promise in research and teaching. Duties include mathematical research, undergraduate and graduate teaching, and departmental and university service. Additional information about the Department may be found at http://math.ucdavis.edu/. Our postal address is Department of Mathematics, University of California, One Shields Avenue, Davis, CA 95616-8633. Applications will be accepted until the positions are filled. To guarantee full consideration, the application should be received by **November 30, 2007**. To apply: submit the AMS Cover Sheet and supporting documentation electronically through http://www.mathjobs.org/. UC Davis is an affirmative action/equal employment opportunity employer and is dedicated to recruiting a diverse faculty community. We welcome all qualified applicants to apply, including women, minorities, individuals with disabilities and veterans.

UNIVERSITY OF CALIFORNIA, DAVIS — Post-doc Positions in Mathematics — The Department of Mathematics at the University of California, Davis, is soliciting applications for a few post-doctoral positions starting July 1, 2008. The areas of specialization are open. To be considered for the Arthur J. Krener Assistant Professor position, the Department seeks applicants with excellent research 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, 2004. The annual salary of this position is $50,900. The teaching load is three quarter-long courses. Arthur J. Krener appointments are renewable for a total of up to three years, assuming satisfactory performance in research and teaching. Applicants for the VIGRE Fellow position must be US citizens, nationals, or permanent residents and have received their Ph.D. no earlier than January 1, 2006. Applicants in all research areas are encouraged to apply. The current annual salary for VIGRE Fellows is $56,956. The teaching load is three quarter-long courses. VIGRE Fellow appointments are renewable for a total of up to three years, assuming satisfactory performance in research and teaching. Additional information about the Department may be found at http://math.ucdavis.edu/. Our postal address is Department of Mathematics, University of California, One Shields Avenue, Davis, CA 95616-8633. Applications will be accepted until the positions are filled. To guarantee full consideration, the application should be received by **November 30, 2007**. To apply: submit the AMS Cover Sheet and supporting documentation electronically through http://www.mathjobs.org/. UC Davis is an affirmative action/equal employment opportunity employer and is dedicated to recruiting a diverse faculty community. We welcome all qualified applicants to apply, including women, minorities, individuals with disabilities and veterans.

UNIVERSITY OF CALIFORNIA, IRVINE — Tenure and Tenure-Track Position in Mathematical Behavioral Science – The School of Social Sciences, University of California, Irvine, seeks candidates who have demonstrated exceptional research in at least one of the following areas: Individual or group decision making, game theory and/or evolutionary game theory, dynamics or learning in the social and behavioral sciences. The candidate's research must have a substantial mathematical component. While the positions are targeted at the junior level (assistant professor, tenure-track) more senior (associate professor with tenure) exceptional candidates are also encouraged to apply. The candidates filling this position will be expected to participate in the Institute for Mathematical Behavioral Sciences and be a full-time faculty member in one of the following Departments at UC Irvine: Cognitive Sciences, Economics, Political Science, or Sociology. All application materials must be uploaded electronically and include: a cover letter describing research and teaching, a curriculum vita, three research papers relevant to mathematical behavioral sciences, and three letters of reference. Please refer to the following website for instructions on how to apply: http://www.socsci.uci.edu/recruit_instructions.php. Applications received by October 10, 2007 will receive fullest consideration, but applications will continue to be accepted until the position is filled. We encourage all qualified applicants, including women and minorities to apply. UC Irvine has an active career partners program, is an Equal Opportunity Employer committed to excellence through diversity, and has a National Science Foundation Advance Gender Equity Program.

UNIVERSITY OF CALIFORNIA, SANTA CRUZ, Mathematics Department — The Mathematics Department at the University of California, Santa Cruz, solicits applications for two tenure track (Assistant Professor) positions in the areas of Low Dimensional Topology or Algebraic Geometry; pending administrative approval. Duties include mathematical research, undergraduate and graduate teaching and departmental and university service. The standard teaching load is four one-quarter courses per year. The Department invites applications from all qualified mathematicians. Colleagues who can contribute to the diversity and excellence of the academic community through their research, teaching, service and/or leadership are particularly encouraged to apply. Rank & Salary: Assistant Professor (9 month basis, step and salary commensurate with qualifications and experience). Minimum Qualifications: Ph.D. or equivalent in Mathematics conferred by 6/30/08; demonstrated achievements or potential for excellence in research, teaching, professional service and leadership. Position Available: July 1, 2008. Closing Date: Positions are open until filled. Screening will begin with applications postmarked by **November 15, 2007**. To ensure full consideration, applications and letters of recommendation must arrive by the initial screening date. Applicants must submit hard copies of the AMS Cover Sheet, a curriculum vitae, a research statement, a teaching statement, and four letters of recommendation (at least one letter must address teaching experience and ability). Letters of recommendation will be treated as confidential documents. (Please direct your letter writers to the UCSC Confidentiality Statement at http://www2.ucsc.edu/ahr/policies/confstm.htm). All applications should be sent to: Faculty Recruitment Committee, Mathematics Department, University of California, 1156 High Street, Santa Cruz, CA 95064. Please refer to position #839-08 in your reply. Inquiries [not applications] can be sent to mathrcr@ucsc.edu. UCSC is an EEO/AA employer. See http://www.math.ucsc.edu/about/jobs.html for a complete job description.

UNIVERSITY OF CONNECTICUT, Department of Mathematics — Assistant Professor — The Department of Mathematics anticipates openings for three to four tenure-track positions at the Assistant Professor level starting Fall 2008. Highly qualified candidates in all mathematical disciplines are encouraged to apply: probability, algebra, number theory, geometry and topology are areas of particular, but not exclusive, focus of the search. For more information about the position, the department or the University, please visit our website at http://www.math.uconn.edu. Qualifications: Candidates must have a completed Ph.D. and demonstrate evidence of excellent teaching ability and outstanding research potential. Review of applications will begin **November 15, 2007** and continue until the positions are filled. We prefer that applications be submitted online at http://www.mathjobs.org/jobs. Applicants may also choose to send resume and at least three letters of recommendation to: Hiring Committee, University of Connecticut, Department of Mathematics, U-3009, 196 Auditorium Road, Storrs, CT 06269-3009. The University of Connecticut is an Equal Opportunity and Affirmative Action Employer. We enthusiastically encourage applications from underrepresented groups, including minorities, women and people with disabilities.

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UNIVERSITY OF ILLINOIS AT CHICAGO, Department of Mathematics, Statistics, and Computer Science — Tenure track position in Mathematics Education — Applications are invited for the following position, effective August 16, 2008, subject to budgetary approval. The Department has active research programs in centrally important areas of pure mathematics, computational and applied mathematics, combinatorics and mathematical computer science, statistics, and mathematics education. See http://www.math.uic.edu for more information. The position is at the Assistant Professor level. Applicants must have a Ph.D. or equivalent degree in the mathematical sciences or mathematics education, or equivalent qualification, a promising record of research in mathematics education, and evidence of strong teaching ability. The salary is negotiable. Send a letter indicating interest in the mathematics education position, vita, statement of research and teaching interests, and at least three (3) letters of recommendation, to: Mathematics Education Search Committee; Dept. of Mathematics, Statistics, and Computer Science; University of Illinois at Chicago; 851 S. Morgan (m/c 249); Box E; Chicago, IL 60607. Applications through mathjobs.org are encouraged. No e-mail applications will be accepted. To ensure full consideration, materials must be received by **January 1, 2008**. However, we will continue considering candidates until all positions have been filled. Minorities, persons with disabilities, and women are particularly encouraged to apply. UIC is an AA/EOE.

UNIVERSITY OF ILLINOIS AT CHICAGO, Department of Mathematics, Statistics, and Computer Science — Research Assistant Professorship — The Department has active research programs in centrally important areas of pure mathematics, computational and applied mathematics, combinatorics and mathematical computer science, statistics, and mathematics education. See http://www.math.uic.edu for more information. Applications are invited for the following position, effective August 16, 2008, subject to budgetary approval. This is a non-tenure track position, normally renewable annually to a maximum of three years. This position carries a teaching responsibility of one course per semester, and the expectation that the incumbent play a significant role in the research life of the Department. The salary for AY 2007-2008 for this position is $53,500, the salary for AY 2008-2009 may be higher. Applicants must have a Ph.D. or equivalent degree in mathematics, computer science, statistics, mathematics education or related field, and evidence of outstanding research potential. Send vita and at least three (3) letters of recommendation, clearly indicating the position being applied for, to: Appointments Committee; Dept. of Mathematics, Statistics, and Computer Science; University of Illinois at Chicago; 851 S. Morgan (m/c 249); Box R; Chicago, IL 60607. Applications through mathjobs.org are encouraged. No e-mail applications will be accepted. To ensure full consideration, materials must be received by **December 31, 2007**. However, we will continue considering candidates until all positions have been filled. Minorities, persons with disabilities, and women are particularly encouraged to apply. UIC is an AA/EOE.

UNIVERSITY OF ILLINOIS AT CHICAGO, Department of Mathematics, Statistics, and Computer Science — Tenure track positions — The Department has active research programs in centrally important areas of pure mathematics, computational and applied mathematics, combinatorics and mathematical computer science, statistics, and mathematics education. See http://www.math.uic.edu for more information. Applications are invited for the following positions, effective August 16, 2008, subject to budgetary approval. Candidates in all areas of interest to the Department will be considered. The position is at the Assistant Professor level. Applicants must have a Ph.D. or equivalent degree in mathematics, computer science, statistics, mathematics education or related field, an outstanding research record, and evidence of strong teaching ability. The salary is negotiable. Send vita and at least three (3) letters of recommendation, clearly indicating the position being applied for, to: Appointments Committee; Dept. of Mathematics, Statistics, and Computer Science; University of Illinois at Chicago; 851 S. Morgan (m/c 249); Box T; Chicago, IL 60607. Applications through mathjobs.org are encouraged. No e-mail applications will be accepted. To ensure full consideration, materials must be received by **November 16, 2007**. However, we will continue considering candidates until all positions have been filled. Minorities, persons with disabilities, and women are particularly encouraged to apply. UIC is an AA/EOE.

UNIVERSITY OF NOTRE DAME, Department of Mathematics, Notre Dame, IN 46556 — The Department of Mathematics of the University of Notre Dame invites applications from recent doctorates (since 2007) in mathematical logic for a postdoctoral position. Candidates in any area of mathematical logic compatible with the research interests of the logicians in the department will be considered. The position is contingent upon the availability of funding and, if funded, will extend for a term of three years beginning August 22, 2008. It is not renewable and is not tenure track; the teaching load is one course per semester. The salary will be competitive with those of distinguished instructorships at other AMS Group I universities, and the position includes summer research support for each of the first two summers and some discretionary funding each year. Applications, including a curriculum vitae and a completed AMS standard cover sheet, should be filed through MathJobs (www.MathJobs.org). Applicants should also arrange for at least three letters of recommendation to be submitted through the MathJobs system. These letters should address the applicant's research accomplishments and supply evidence that the applicant has the ability to communicate articulately and teach effectively. Notre Dame is an equal opportunity employer, and we particularly welcome applications from women and minority candidates. The evaluation of candidates will begin D**ecember 1, 2007**. Information about the department is available at http://math.nd.edu.

UNIVERSITY OF NOTRE DAME, Department of Mathematics, Notre Dame, IN 46556 — Notre Dame NSF-SUMR Instructorship in Mathematics — The Department of Mathematics of the University of Notre Dame invites applications from recent doctorates (since 2005) for the position of Notre Dame NSF-SUMR Instructor in Mathematics. Candidates in any specialty compatible with the research interests of the department will be considered. The position is for a term of three years beginning August 22, 2008; it is not renewable and is not tenure track. The teaching load is one course per semester. Additional duties include mentoring of Honors Mathematics majors, and applicants should provide evidence of prior experience mentoring undergraduates. The salary will be competitive with those of distinguished instructorships at other AMS Group I universities, and the position includes $10,000 per year of summer research support for each of the first two summers. The position is associated with the department's recent successful five-year NSF grant in the program "Mentoring Through Critical Transition Points". Applications, including a curriculum vitae and a completed AMS standard cover sheet, should be filed through MathJobs (www.MathJobs.org). Applicants should also arrange for at least three letters of recommendation to be submitted through the MathJobs system. These letters should address the applicant's research accomplishments and supply evidence that the applicant has the ability to communicate articulately and teach effectively. Notre Dame is an equal opportunity employer, and we particularly welcome applications from women and minority candidates. The evaluation of candidates will begin **December 1, 2007**. Information about the department is available at http://math.nd.edu.

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UNIVERSITY OF PENNSYLVANIA — Junior Positions in Mathematics — Several positions (including possible tenure-track positions) will be available beginning July 1, 2008. Candidates should have strong research credentials and be recognized as potentially successful teachers of undergraduate and graduate students. Applications should be submitted online through www.mathjobs.org. For further information, please contact personnel@math.upenn.edu or Personnel Committee, Department of Mathematics, University of Pennsylvania, Philadelphia, PA 19104-6395. The University of Pennsylvania is an equal opportunity, affirmative action employer. Women and minority candidates are encouraged to apply.

UNIVERSITY OF PENNSYLVANIA — Tenure Positions in Mathematics — Commencing July 1, 2008, one or more tenure positions may be available in mathematics especially in analysis/applied mathematics and geometry/topology. Candidates must have outstanding, internationally recognized research achievements and be successful teachers of undergraduate and graduate students. Rank and salary will depend upon accomplishment and experience. Applications should be submitted online through www.mathjobs.org. For further information, please contact personnel@math.upenn.edu or Personnel Committee, Department of Mathematics, University of Pennsylvania, Philadelphia, PA 19104-6395. The University of Pennsylvania is an equal opportunity, affirmative action employer. Women and minority candidates are encouraged to apply.

UNIVERSITY OF SAN FRANCISCO, Department of Mathematics — The Department of Mathematics at the University of San Francisco (USF) invites applications for a tenure-track Assistant Professor position, starting fall 2008. All research areas are acceptable; evidence of superior teaching ability is required. USF is an AAEOE. For details, please see: http://math.usfca.edu/job.

WILLIAMS COLLEGE — Williams College Department of Mathematics and Statistics invites applications for a newly authorized visiting position in mathematics for the 2008-2009 year, at the rank of assistant professor. A Ph.D. is required. Send a vita and three letters of recommendation on teaching and research to: Visitor Hiring Committee, Department of Mathematics and Statistics, Williams College, Williamstown, MA 01267. Consideration of applications will begin on **November 15** and continue until the position is filled. Williams College is dedicated to providing a welcoming intellectual environment for all of its faculty, staff and students; as an AA/EOE employer, Williams especially welcomes applications from women and minority candidates.

WILLIAMS COLLEGE — The Williams College Department of Mathematics and Statistics invites applications for one tenure track position in mathematics, beginning fall 2008, at the rank of assistant professor (in an exceptional case, a more advanced appointment may be considered). We are seeking a highly qualified candidate who has demonstrated excellence in teaching and research, and who will have a Ph.D. by the time of appointment. Williams College is a private, residential, highly selective liberal arts college with an undergraduate enrollment of approximately 2,000 students. The teaching load is two courses per 12-week semester and a winter term course every other January. In addition to excellence in teaching, an active and successful research program is expected. To apply, please send a vita and have three letters of recommendation on teaching and research sent to the Hiring Committee, Department of Mathematics and Statistics, Williams College, Williamstown, MA 01267. Teaching and research statements are also welcome. Evaluation of applications will begin on or after November 15 and will continue until the position is filled. Williams College is dedicated to providing a welcoming intellectual environment for all of its faculty, staff and students; as an EEO/AA employer, Williams especially encourages applications from women and minorities. For more information on the Department of Mathematics and Statistics, visit http://www.williams.edu/Mathematics.

YORK UNIVERSITY — Assistant Professor in Mathematical Finance — Applications are invited for one tenure-track appointment in the Department of Mathematics and Statistics at the Assistant Professor level in the area of Mathematical Finance to commence July 1, 2008. The successful candidate must have a Ph.D. in hand or near completion (expected in 2008), a proven record of independent research excellence, and superior teaching ability. Preference will be given to candidates who can strengthen existing areas of present and ongoing research activity. The successful candidate must be eligible for prompt appointment to the Faculty of Graduate Studies. Applications must be received by **January 15, 2008**. Applicants should send resumes and arrange for three signed letters of recommendation (one of which should address teaching) to be sent directly to: Mathematical Finance Search Committee, Department of Mathematics and Statistics, N520 Ross, York University, 4700 Keele Street, Toronto, Ontario Canada M3J 1P3. E-mail: finance.recruit@mathstat.yorku.ca, Website: www.math.yorku.ca/Hiring. All positions at York are subject to budgetary approval. York University is an Affirmative Action Employer. The Affirmative Action Program can be found on York's website at www.yorku.ca/acadjobs or a copy can be obtained by calling the affirmative action office at 416-736-5713. All qualified candidates are encouraged to apply; however, Canadian citizens and Permanent Residents will be given priority.

YORK UNIVERSITY — Assistant Professor in Category Theory and Its Applications — Applications are invited for one tenure-track appointment at the Assistant Professor level in the Department of Mathematics and Statistics to commence July 1, 2008. Candidates in the area of Category Theory and its applications to mathematics, computer science or physics will be considered. The successful candidate must have a Ph.D. in hand or near completion (expected in 2008), a proven record of independent research excellence, and superior teaching ability. The successful candidate must be eligible for prompt appointment to the Faculty of Graduate Studies. Preference will be given to candidates who can strengthen existing areas of present and ongoing research activity. Applications must be received by **January 15, 2008**. Applicants should send resumes and arrange for three signed letters of recommendation (one of which should address teaching) to be sent directly to: Pure Mathematics Search Committee, Department of Mathematics and Statistics, N520 Ross, York University, 4700 Keele Street, Toronto, Ontario, Canada M3J 1P3. E-mail: puremath.recruit@mathstat.yorku.ca, Website: www.math.yorku.ca/Hiring. All positions at York are subject to budgetary approval. York University is an Affirmative Action Employer. The Affirmative Action Program can be found on York's website at www.yorku.ca/acadjobs or a copy can be obtained by calling the affirmative action office at 416-736-5713. All qualified candidates are encouraged to apply; however, Canadian citizens and Permanent Residents will be given priority.

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