AMS
American Mathematical Society

FALL 2008

NEWSLETTER

A PUBLICATION FROM THE AMS PUBLIC AWARENESS OFFICE TO INFORM MEMBERS ABOUT SOCIETY ACTIVITIES AND NEWS.

INSIDE THIS ISSUE

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Mathematics Research Communities in Snowbird, UT

The inaugural **Mathematics Research Communities (MRC)** summer conferences, *Teichmüller Theory and Low-Dimensional Topology*, *Scientific Computing and Advanced Computation*, and *Computational Algebra and Convexity*, held at the Snowbird Resort in Utah, were a great success. The week-long conferences drew 80 early-career mathematicians.

*"I loved the workshop! I've learned so much, the format was great, the hike in the middle of the week was great too. Really, the best thing of all was to let us go at the pace we needed to understand things. Also having Eisenbud give a short open-problem talk *at the end* of the workshop I think gave all of us an idea of what we might want to do with the material we just learned... I'm going to have two projects with two workshop participants, and our conversations were inspired by the evening talks."*

—Sonja Petrovic (University of Kentucky)

"The quantity and quality of mathematical and professional discussions among the participants seemed very high. I'm looking forward to seeing many of the students/postdocs at the Annual meeting in January."

—Abby Thompson (UC Davis), co-organizer of the Teichmüller Theory and Low-Dimensional Topology session

The MRC conferences are funded by the *National Science Foundation* for an initial period of three years. Each conference is the first event in a program that will include special sessions at the Joint Mathematics Meetings, a longitudinal study, and a continuation of the connections and collaborations via an electronic network.

Read more More photographs of MRC 2008 are at **www.ams.org/ams/mrc-2008.html.**

Developments on the AMS Website

Author Resource Center

This all-in-one guide for writing and publishing mathematics includes tools for writing mathematics (LaTeX and TeX resources and graphics guidelines), Mathematical Reviews tools to create references and provide linking capabilities, resources for AMS book authors (FAQ, how to prepare a proposal, and how to produce and submit your manuscript), resources for AMS journal authors (information about each journal, author handbook, details about copyright, permissions, manuscript tracking, and more), AMS Acquisitions Editors' contact information, and access to technical support.

"I found there many interesting topics." "… a number of questions proved useful. Thanks for pointing me to the right place!" "Thank you very much! … It [the instruction on the numbering of equations in an appendix] worked immediately just as it said in FAQ."

— from users of the AMS Author FAQ

Read more Use the AMS Author Resource Center at **www.ams.org/authors.**

The Profession

The AMS website now features a collection of resources about and for the profession. Visitors can easily find a wealth of information, including data on the profession (annual surveys from 1957 to the present, and forms to submit data), information for department leaders (workshops, awards, culture statements), mathematics people (directories, biographical sources, "What do mathematicians do?"), mathematics education (a selection of articles that have appeared in *Notices of the AMS*), resources for high school, undergraduate, and graduate students, AMS outreach projects (conferences on promoting undergraduate research in mathematics, Arnold Ross Lecture Series, AMS Book & Journal Donation Program, among others), and funding and fellowships (for individuals and departments).

Read more Explore the collection at **www.ams.org/profession**

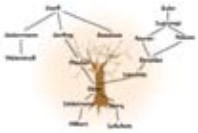
Mathematical Moments with Podcasts

The web portal allows users to find ***Mathematical Moments*** grouped by topic, with podcasts, and translated into other languages. The podcasts include interviews with researchers **Kevin Short** *(University of New Hampshire)*, on winning a Grammy in 2008 for helping digitize a long-lost live recording of **Woody Guthrie**; **Ken Golden** *(University of Utah)* on adventures he's had traveling to extreme locations to gather data for his sea ice research; **Eva K. Lee** *(Georgia Institute of Technology)* on how she used math to develop more effective cancer treatments; and **Don Saari** *(University of California, Irvine)* on how mathematics relates to voting.

The ***Mathematical Moments*** program of the AMS Public Awareness Office is a series of small posters that promote appreciation and understanding of the role mathematics plays in science, nature, technology, and human culture.

Read more Over 70 Mathematical Moments may be freely downloaded at **www.ams.org/mathmoments/.**

MathSciNet Links to Mathematics Genealogy Project



MathSciNet now offers direct linking to the **Mathematics Genealogy Project (MGP)** through its "Authors" search tab. The results obtained after performing an author search on this page include a drop-down menu (hover the cursor over the author of interest) that contains a link to the author's MGP page. Here users may find information about that author: name of the university which awarded his or her degree, the year in which the degree was awarded, the complete title of the dissertation, the name(s) of the advisor(s), and for some, a list of the mathematician's students.

Read more Explore MathSciNet at **www.ams.org/mathscinet/** and see links to the MGP at **www.genealogy.ams.org/.**

AMS Sponsors Exhibit on Mathematics and Cardiology

The AMS sponsored an exhibit entitled "Mathematics and Cardiology: Partners for the Future," presented by **Professor Sunčica Čanić** of the **University of Houston**

Professor Sunčica Čanić, right (University of Houston), with Congressman Vernon Ehlers (R-MI).

at the **14th annual Coalition for National Science Funding (CNSF)** Exhibition held in June on Capitol Hill in Washington, DC. Čanić showed how sophisticated mathematics can be used to improve design of vascular prostheses called stents and stent-grafts used in nonsurgical repair of aortic abdominal aneurysm (AAA) and coronary artery disease (CAD). The CNSF is an alliance of over 110 scientific and professional societies and universities that are united by a concern for the future vitality of the national science, mathematics, and engineering enterprise. This coalition, chaired by Samuel M. Rankin, Associate Executive Director of the AMS and Director of its Washington office, works to increase the federal investment in the National Science Foundation (NSF). The CNSF Exhibition is an annual event that showcases the crucial role the NSF plays in meeting the nation's research and education needs, and provides an opportunity for university researchers and educators to describe their work to policymakers on Capitol Hill.

Read more Learn more about Čanić's research and the event at **www.ams.org/government/cnsfex08.html.**

Three Questions for… Stéphane Jaffard, President of the Société Mathématique de France

1. What do you see as your greatest challenges or most exciting opportunities as the new president of the SMF?

One of the most critical long-range challenges is employment of young PhDs in mathematics. It is vital for math departments to keep important PhD and Postdoctoral programs. Those students cannot all become professional mathematicians teaching in universities, so in order to keep PhDs in mathematics attractive, we have to make those who have earned PhDs sought after by other scientists and by companies. On one hand, this means developing PhD programs involved in the interaction between mathematics and other sciences. On the other hand, individuals with PhDs in mathematics should be valued by companies not only for the technical competencies earned, but also as a guarantee that the PhD mathematician—employee—will prove to be original and imaginative when confronted with extremely complex situations. There is still a long way to go before we completely succeed in promoting this point of view!

An unexpected challenge I met as soon as I became President in June 2007 was the big turmoil following the election of President Sarkozy: Important reforms were implemented in all areas, including education and research. Politicians don't necessarily consider mathematics as a priority, so the SMF joined forces with other societies in physics and chemistry in order to promote the importance of fundamental sciences, to help ensure that mathematics and basic science research are not forgotten in the midst of upcoming changes.

2. Can you tell us how you came to join the AMS in 1989?

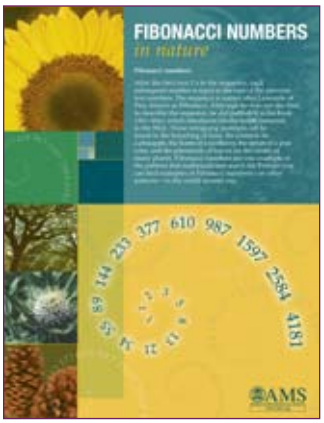
In 1989, I had just completed a PhD on wavelet analysis under the supervision of Yves Meyer, and I spent a postdoc year at the IAS (Institute for Advanced Study) in Princeton. I joined the AMS for a simple reason: A free one-year membership was offered to members of the IAS… and I got hooked. Indeed, it is very difficult to keep informed of what's going on in the whole range of mathematics now; reading the *Notices* and the *Bulletin* is a pleasant and efficient way to keep in touch.

3. How do you see the role of the SMF in promoting awareness of mathematics to the public?

We want to spread the "virus of mathematics" to young talented teenagers, show them that mathematics provides exciting challenges of a different nature from what they are taught. The SMF wants to help develop math clubs, and perhaps organize math summer camps. We will also develop plans to communicate with media, politicians, and leaders in order to make them aware of the role of mathematics in other sciences and in society's big challenges of the 21st century. A conference "Maths à venir" will take place in Paris in the fall of 2009, specifically with this purpose.

Read more Information about SMF is at **www.smf.emath.fr/** or **www.smf.emath.fr/en/**

AMS Printable Posters



The American Mathematical Society provides downloadable pdf files of posters promoting awareness of mathematics and of programs and services to post in common areas, classrooms, and offices. The pdfs print on 8.5 x 11" and A4-size paper. Some are available upon request in printed poster size, compliments of the AMS.

To order a copy of this "Fibonacci Numbers in Nature" poster, email paoffice@ams.org with "fib-poster" in the subject line.

Read more See and download pdfs of all the posters at **www.ams.org/ams/ams-printable-posters.html.**

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201 Charles Street
Providence, Rhode Island 02904-2294 USA

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AMS MEMBER NEWSLETTER

AMS Executive Director Ewing to Head *Math for America*

John H. Ewing, who has served as Executive Director of the Society since 1995, will become President of the new national program ***Math for America*** in early 2009. During the course of his service for the AMS, Ewing has overseen many changes in the operations and programs of the Society. MathSciNet, born in 1996, underwent many enhancements and the database grew to what now includes over 3 million citations; the Publications program expanded to include several new book series including AMS Chelsea Publishing, Graduate Studies in Mathematics, Student Mathematical Library, and co-publications with organizations around the world; the Public Awareness Office was created to serve the Society and broader mathematical community; *Notices of the AMS* transformed into the Society's flagship journal, in print and online; the publication process for AMS books and journals became almost wholly electronic and streamlined; and many programs for the profession were developed, such as the Book & Journal Donation program, authoring tools, Epsilon Fund, and award for Mathematics Programs that Make a Difference. The AMS also saw growth in membership, revenue from publications, and outreach programs. Ewing leaves the Society strong and stable. His interest in bettering mathematics education leads him to *Math for America*, a nonprofit organization with a mission to improve mathematics education in secondary public schools in the U.S. by recruiting, training, and retaining outstanding mathematics teachers. "I will miss the AMS and my colleagues there," Ewing said, "but I am excited about the opportunity to create a program that could profoundly improve mathematics education."

Read more Learn about Math for America at **www.mathforamerica.org/.**