SPRING 2009

AMS
American Mathematical Society

NEWSLETTER

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

Highlights of the Joint Mathematics Meetings

A record number of attendees, nearly 6,000, came to the 2009 Joint Mathematics Meetings of the American Mathematical Society (AMS) and Mathematical Association of America (MAA) in Washington DC, January 5–8. Researchers presented approximately 2,000 papers from all specialties of mathematics, and mathematicians of all ages presented work; met colleagues, mentors and new friends; attended the annual prize ceremony; and saw a wide range of exhibitors.

AMS Membership booth

Grand Opening of the Exhibits

In the Employment Center

At the Student Hospitality Center

AMS Publications exhibit

AMS executive directors past and present, l to r: Don McClure (2009–), John Ewing (1995–2008), and Bus Jaco (1988–1995)

In the Exhibit Hall

At the Graduate School Fair

Who Wants to Be a Mathematician champions

Workshop for Department Chairs

Read more Photos and write-ups about the 2009 Joint Mathematics Meetings prizes, invited addresses and exhibits are at **www.ams.org/ams/jmm09-highlights.html .**

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Mathematics Awareness Month - April 2009

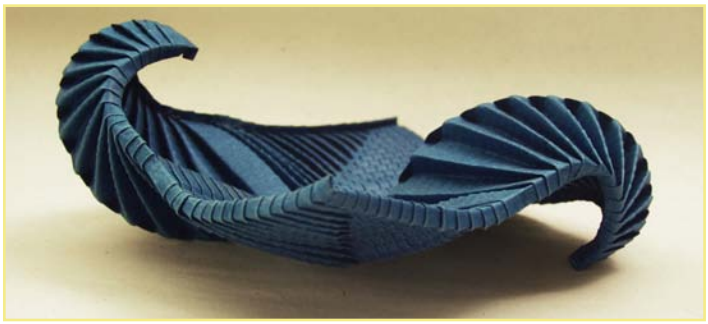
printed on paper that's 50% recycled, 25% postconsumer waste

Highlights of the Joint Mathematics Meetings, *continued…*

Mathematical Art Exhibition Prize

The Mathematical Art Exhibition included works by 36 artists in various media, and for the first time prizes were awarded to three of the artists.

The inaugural Mathematical Art Exhibition Prizes were awarded to **Goran Konjevod**, assistant professor of computer science and engineering at Arizona State University (First Prize, US$500), for his origami work "Wave (32), 2006"; **Carlo Séquin**, professor



"Wave (32), 2006"

of computer science, EECS Computer Science Division, University of California, Berkeley (Second Prize, US$300), for his sculpture "Figure-8 Knot, 2007"; and **Robert Fathauer,** Tessellations (Third Prize, US$200), for "Twice Iterated Knot No. 1, 2008". The prize "for aesthetically pleasing works that combine mathematics and art" was established in 2008 through an endowment provided to the American Mathematical Society by an anonymous donor who wishes to acknowledge those whose works demonstrate the beauty and elegance of mathematics expressed in a visual art form.

"Figure-8 Knot, 2007"

"Twice Iterated Knot No. 1, 2008"

2009 AMS Travel Grants for Graduate Students

Travel grants for graduate students to attend the 2009 Joint Mathematics Meetings were funded by a generous gift to the Society. The invitation to apply for the support was sent out in October 2008, and by the October 27 deadline 270 applications had been received. The application form asked students for information about their anticipated activities at the JMM and required that a representative from the student's university sign an agreement to provide matching funds to the graduate student for the trip. The students planned to give talks, attend sessions in their area of research, and, for some, interview for jobs.

John Lott, Patricia Bauman, and **Solomon Friedberg** served on the panel that reviewed the applications, and in November awards of up to US$500 were made to 60 applicants. (In a few cases, AMS reduced its award amount to a level the school could match.) Many of the graduate students attended JMM for the first time and demonstrated their thriftiness by sharing rooms, carpooling, taking the Metro, and eating fast food. Many expressed gratitude for the opportunities the travel grants provided.

"Traveling to the JMM was a critical part of my development as an academic mathematician. It was an invaluable experience to have the interviews and to participate in the Employment Center...[The grant] also gave me the opportunity to talk with one of my collaborators who lives far away and whom I only get to see rarely. "

"In addition to being exposed to some new works in progress in my field and having the opportunity to present my own work, I was able to meet and talk with a number of people in my subfield of Khovanov homology...it was a very valuable connection made possible through this visit to the Joint Meetings."

"The Joint Mathematical Meetings were a terrific opportunity for me, a graduate student, to interact with many of the top scientists and teachers in academia. It was an amazing experience to learn from them, share experiences, and have a glimpse of what the future of science and education is about."

"The grants were of great benefit to the recipients," said AMS Executive Director Don McClure. "The AMS will certainly do its best to repeat this program for the 2010 meetings in San Francisco."

Can you solve this Undergraduate Student Challenge Question?

The AMS Membership booth at JMM featured a "Question of the Day" challenge for undergraduate students. Each day prizes were given to five students who answered correctly. Try your hand at this challenge:

Romanagram for MMIX

Three mathematicians' names have been altered. The letters in each name that are roman numerals were removed and the remaining letters were rearranged to form the words or phrases below (capital letters are ignored). The total value of the removed letters/numerals from each name accompanies the corresponding anagrammed word or phrase.

Example: neat oreo … Removed roman numerals sum is 1160

Answer: Donald Coxeter. (Removed: D, L, D, C, X leaving o, n, a, o, e, t, e, r, which can be rearranged to form the given phrase.)

1. breath …. Removed roman numeral sum is 1057
2. warn ewes …. Removed roman numeral sum is 551
3. hankerer …. Removed roman numeral sum is 2102

Stumped? Email paoffice@ams.org for the answers.

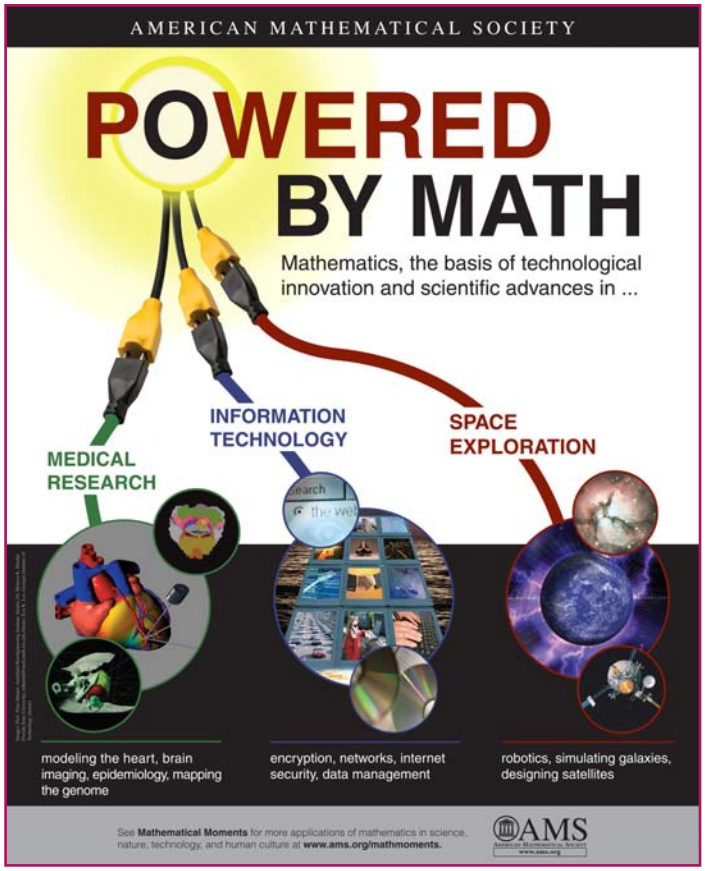
Don McClure Named AMS Executive Director

Photograph by John Abromowski, Brown University

Donald E. McClure of Brown University has been named executive director of the AMS. McClure succeeds John H. Ewing, who held the post for the past 13 years and who is now president of Math for America, a program that aims to attract mathematically talented young people to teach in the nation's schools. McClure was elected to the AMS Board of Trustees in 1995 and served on the board until 2000. His service included stints as chair of the board and as liaison to the AMS Publications Division. From 2003 until his appointment as executive director, McClure was AMS associate treasurer. McClure received his bachelor's degree in 1966 from the University of California, Berkeley, and his Ph.D. in applied mathematics in 1970 from Brown University. He has spent his entire career at Brown, starting as an instructor in 1969 and rising to the rank of professor in 1982, during which time he has advised 15 Ph.D. students. McClure's research concerns the formulation of probabilistic models for images and the design of algorithms based on those models and classical statistical principles.

Read more Read more about McClure at **www.ams.org/ams/press/mcclure-exdir.html.**

AMS Printable Posters



The AMS provides downloadable files of posters promoting awareness of mathematics and of programs and services that can be posted 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 "Powered by Math" poster, email paoffice@ams.org with "power-poster" in the subject line.

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

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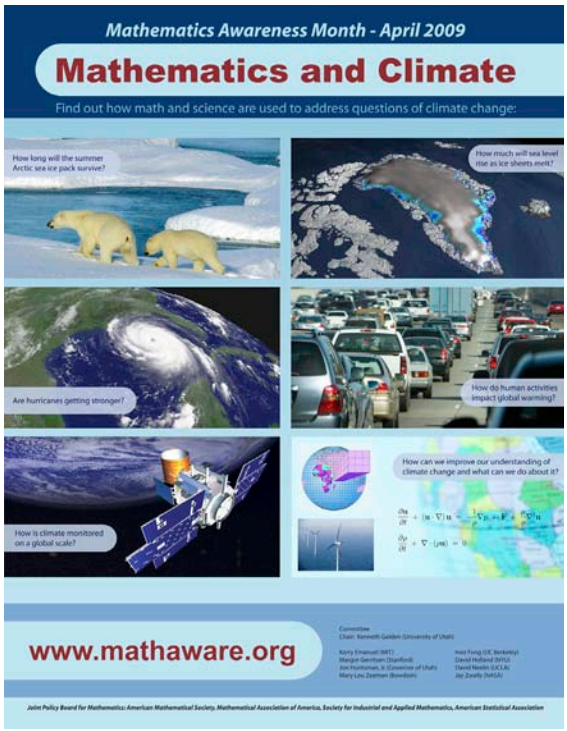
AMS MEMBER NEWSLETTER

Mathematics Awareness Month – April 2009

The American Mathematical Society, the American Statistical Association, the Mathematical Association of America, and the Society for Industrial and Applied Mathematics announce that the theme for Mathematics Awareness Month, April 2009, is **Mathematics and Climate**.

How long will the summer Arctic sea ice pack survive?
Are hurricanes and other severe weather events getting stronger?
How much will sea level rise as ice sheets melt?
How do human activities affect climate change?
How is global climate monitored?

Calculus, differential equations, numerical analysis, probability, and statistics are just some of the areas of mathematics used to understand the oceans, atmosphere, and polar ice caps, and the complex interactions among these vast systems.

Read more Download the poster, read the theme essays, hear podcast interviews, and submit theme-related activities of math departments and math clubs at **www.mathaware.org**.