

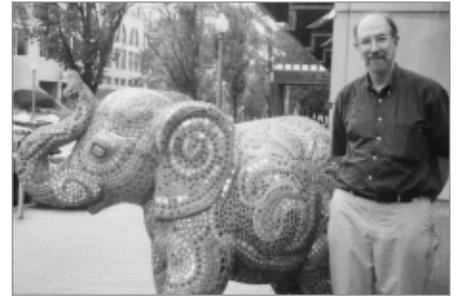
A QUARTERLY  
 PUBLICATION TO INFORM  
 MEMBERS ABOUT  
 SOCIETY ACTIVITIES.

This special issue is one in a series of occasional newsletters that profile AMS members involved in outreach and special programs outside of their teaching and research.

profiles

## Joe Malkevitch (York College, CUNY, Jamaica, NY)

Malkevitch volunteers to write the **Feature Column**, a series of monthly essays on mathematical topics intended for a broad audience. The column is part of *What's New in Mathematics*, on the AMS website. His recent column on apportionment generated praise from a law firm: "After much discussion about today's [11/5/02] elections, I and some colleagues of mine (lawyers all) confessed we knew nothing about apportionment issues from a legal standpoint. Once we nailed that down, I went to research the statutorily mandated Huntington-Hill method and found your two recent AMS articles. Both were tremendously lucid and readily understandable ... Thanks very much for sharing your work with the rest of us."



Malkevitch has also run the York Mathematics and Computer Club for over 30 years and posts his "Mathematical Tidbits" (based on his talks at the Club and in classes) at [www.york.cuny.edu/~malk/](http://www.york.cuny.edu/~malk/) for general viewing and comment.

*Malkevitch on promoting awareness of mathematics:* Mathematics offers society a vast assortment of tools for scientists, engineers, businessmen, and the average person. Applications of mathematics range from medical imaging to wireless communication to designing good airline schedules. Furthermore, mathematics has been a hidden partner in nearly all the technologies developed in the late 20th century. Yet, independent of the fact that mathematics has uses, learning and doing mathematics can offer individuals an emotional experience that rivals listening to a Mozart opera, viewing a Rembrandt painting, or reading a Donne poem. Many members of both the mathematics community and general public are unaware of the range of mathematics' applicability, and many members of the general public have had trouble getting pleasure from the study of mathematics. I greatly value the opportunity the AMS has made available to me to share my sense of wonder about mathematics and its uses with others.

**Read more** Read Malkevitch's Feature Columns (as well as past columns written by Tony Phillips and Steve Weintraub) at [www.ams.org/new-in-math/](http://www.ams.org/new-in-math/).

## Annalisa Crannell (Franklin & Marshall College, Lancaster, PA)

Crannell is one of the facilitators of **VIEWPOINTS**, a series of workshops for college and high school instructors on the connections between mathematics and art. With collaborator Marc Frantz (Indiana University), she has developed workshops that lead participants through a series of enjoyable, classroom-tested, hands-on activities based on the participants' experiences and explorations.



This is just one of Crannell's many outreach programs for local student groups, high school teachers, museum administrators, and the general public. She and her collaborator have given talks and workshops on mathematics, art, and writing mathematics at colleges, universities, and museums across the country. She even enjoys taking her mathematics classes to coffeehouses!

*Crannell on sharing mathematics with students:* Paul Erdős taught us that a mathematician is a machine for turning coffee into theorems. I've found that coffeehouses can turn math classes into research teams, and all of a sudden, my students have become my colleagues.

**Read more** See the 2003 VIEWPOINTS program (June 8–13) and those of past years at <http://php.indiana.edu/~mathart/viewpoints/>.

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## Raymond Johnson (University of Maryland, College Park)

There are many “firsts” in Johnson’s life: First African-American to graduate from Rice University when his Ph.D. was awarded in 1969, first African-American faculty member of the University of Maryland’s Department of Mathematics (appointed in 1968), and first African-American faculty member to rise through the ranks from assistant to full professor at the university. Besides serving as chair of the mathematics department from 1991 to 1996, publishing dozens of scholarly papers, organizing conferences, presenting research in the field of harmonic analysis, and serving in leadership roles in national and international mathematics organizations, he is widely recognized for his involvement in recruiting African-American graduate students in mathematics at the University of Maryland and helping them succeed in the program. His outreach efforts have been successful because he is deeply involved in fostering an atmosphere of acceptance and support for students throughout their time in the graduate program. One recent Ph.D. recipient attributed her success to the fact that “He and his wife adopted me.”

*Johnson on sharing his experiences:* “I got involved in outreach to the minority community because I am black, and because when I became associate chair for graduate studies, it became part of my job. I learned through discussing my mistakes with experts at AMS meetings, trial and error, and trying to make information available that I would have wanted to know when I was a student. The students were the real heroes and heroines. They were willing to play by the rules, but they were happy to have someone explain the rules and why and how the rules were being changed.

**Read more** Johnson describes his educational experiences since childhood in “You can get there even from Alice, Texas (if you’re lucky and you know where there is)” on his homepage at [www.math.umd.edu/users/rlj/RJ.html](http://www.math.umd.edu/users/rlj/RJ.html).

Also see *The Chronicle of Higher Education* article, “A University Beats the Odds to Produce Black Ph.D.’s in Math”, by Alex P. Kellogg (February 16, 2001) at <http://chronicle.com>.

## Joe Gallian (University of Minnesota, Duluth)

Gallian has run the **Duluth Summer Undergraduate Research Program** at UMD since 1977. This Research Experience for Undergraduates, funded by the NSF and the NSA, helps highly talented undergraduates engage in professional level research. Over the years 108 students have participated, many more than once. More than 100 papers written by students in the program have been accepted for publication in mainstream research journals. In addition to overseeing the research activities, Gallian includes field trips and social events as part of the program.

Since 1998 Gallian has been co-director of Project NExT, a professional development program for new Ph.D.’s funded in part by the AMS. He has given the closing address at every NExT workshop, and has helped organize the workshops held at Mathfest and at the annual Joint Mathematics Meetings. In addition to these activities, he is chair of the Advisory Committee on Mathematics and Art, the theme of Mathematics Awareness Month 2003 in April.

*Gallian on how he chooses to support the mathematics community:* Early on I realized that there are many ways besides teaching and research in which one can make a significant contribution to the mathematics community. My ways are to assist highly talented undergraduate students to develop their talent and to assist new Ph.D.’s in getting their careers off to a good start.

**Read more** See the Duluth Undergraduate Research Program description and photographs of participants at [www.d.umn.edu/~jgallian/](http://www.d.umn.edu/~jgallian/).



Gallian (first row, left) with students



Walker (first row, right) with colleagues and students at a recent NCUWM

## Judy Walker (University of Nebraska, Lincoln)

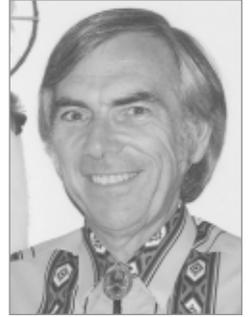
Walker is co-chair of the organizing committee for the annual **Nebraska Conference for Undergraduate Women in Mathematics**. The conference gives outstanding undergraduate women the opportunity to discuss their own research and to meet other women who share their interest in the mathematical sciences. As co-chair Walker invites speakers, arranges logistics, and coordinates the presentations. In addition to being an active researcher in algebraic coding theory and an award-winning teacher, Walker has been very active in encouraging girls and women to study mathematics. She co-founded the ALL GIRLS/ALL MATH program (partially funded by the AMS Epsilon Program) and spearheaded the nomination effort that led UNL’s department of mathematics and statistics to receive the 1998 Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring. The award recognized the department’s success in mentoring female graduate students.

*Walker on the rewards of working on these programs:* Being involved in these outreach activities is one of my favorite parts of being a mathematician. It’s a lot of work, but watching an ALL GIRLS/ALL MATH participant gain confidence in her mathematical abilities and later decide to major in math, or having a Nebraska Conference for Undergraduate Women in Mathematics participant tell me that she’s decided to go to graduate school because now research doesn’t seem so scary after all, makes it all worthwhile.

**Read more** For information about the 2003 and past NCUWMs, go to [www.math.unl.edu/~ncuwm/](http://www.math.unl.edu/~ncuwm/). For information about the ALL GIRLS/ALL MATH program, go to [www.math.unl.edu/~agam/](http://www.math.unl.edu/~agam/).

## Robert Megginson (Mathematical Sciences Research Institute, Berkeley, CA)

One of about 12 Native Americans who are known to hold doctorates in mathematics, Megginson is deeply concerned about the underrepresentation of minorities in mathematics and devotes significant time addressing the problem. In addition to serving on committees involved in the underrepresentation problem, he also spends time working directly with students of color to help them succeed in mathematically based fields. Every summer since 1992 he has worked in and helped design programs for pre-college students and their teachers at Turtle Mountain Community College (a tribally controlled college of the Turtle Mountain Chippewa Nation in North Dakota), which aim to keep Native American students in the educational system. Megginson also mentors undergraduate and graduate students of color from varied backgrounds and attends the annual conferences of the Society for the Advancement of Chicanos and Native Americans in Science (SACNAS) to meet with and mentor mathematically talented students. He received the 1999 Ely S. Parker Award of the American Indian Science and Engineering Society for excellence in scientific accomplishment and outreach to his community and was one of ten individuals who received the 1997 U. S. Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring.



*Megginson on why he devotes time to outreach:* There has been some recent progress in getting more women and underrepresented minorities involved in the mathematical enterprise, but we still must do much better. Our nation cannot hope to remain a world leader in mathematics if we continue to discard so much of our mathematical talent before it can fully develop. Working on these issues can take time, particularly from summers that we would like to be able to devote to our research, but I cannot imagine anything much more rewarding than helping others succeed in a field that they might have believed closed to them because of their gender or background. This is an area in which the AMS and its membership have much to contribute.

**Read more** Megginson's brief autobiography, written for high school students, is on the SACNAS Biography Project website at [www.sacnas.com/biography](http://www.sacnas.com/biography).



## Harry Coonce (North Dakota State University)

In 1997 Coonce wanted to find the name of his academic advisor's advisor. To his surprise and dismay the information was not readily available. Thus the seed was planted for what has become the **Mathematics Genealogy Project**, an online database of 60,000 records dating back to 1634 of mathematicians in over 800 universities in 68 countries.

The searchable database includes the degree recipient, university, year in which degree was awarded, dissertation title, name of the advisor (linked to a list of his/her other students), and a list of the degree recipient's students, if any. Mathematicians use the popular site for research and for fun. Editors, agencies, and others find the site helpful when considering peer reviews and grants, to avoid conflicts of interest. Coonce started the project while he was teaching; in his retirement he continues to develop and enhance the database.

*Coonce on what's new with the Mathematics Genealogy Project:* The project was recently moved to its new home at North Dakota State University. During the coming year many new enhancements are planned: We expect to establish several more mirror sites in Canada, Brazil, France, and elsewhere, make several of the key pages available in different languages, and begin to collect data reflecting the Mathematics Subject Classification of the dissertations.

**Read more** Search the Mathematics Genealogy Project at [www.genealogy.math.ndsu.nodak.edu/](http://www.genealogy.math.ndsu.nodak.edu/). Use the online forms or send email to Coonce at [harry.coonce@ndsu.nodak.edu](mailto:harry.coonce@ndsu.nodak.edu) if you have any information to add to the database.

## Glenn Stevens (Boston University)

Stevens is the director of **PROMYS** (Program in Mathematics for Young Scientists), a summer program at BU for motivated high school students. As director, he is the primary coordinator and manager of grant distribution, logistics, participant and counselor selection, and faculty. The goal of the PROMYS experience is "to engage young people in the struggle to understand an intricate collection of significant mathematical ideas, to encourage them to ask questions, and to help them realize that through careful thought they can penetrate formidable obstacles and invent their own answers to difficult questions. The attitudes through this experience will be far more valuable than the particular topics mastered." His leadership and commitment make PROMYS one of the most successful summer programs in the country—gathering talented math students from every region of the U.S., guided by research mathematicians and visiting scientists. He also teaches the number theory component of the program.

*Stevens on the rewards of working with students and teachers in PROMYS:* Working with so many bright and energetic young people is a rare privilege that I am fortunate to enjoy through the program. To see so many of the young PROMYS participants mature into productive research scientists and mathematicians has been a richly gratifying pleasure for all of us. Their boundless energy and enthusiasm affects everyone who works with them and has inspired everything else that happens in PROMYS—the advanced seminars, the research labs, as well as the teacher workshops. The AMS has played a crucial role in keeping PROMYS alive by providing student scholarships through the Epsilon Fund and by endorsing our work as we struggle to develop a network of financial supporters.

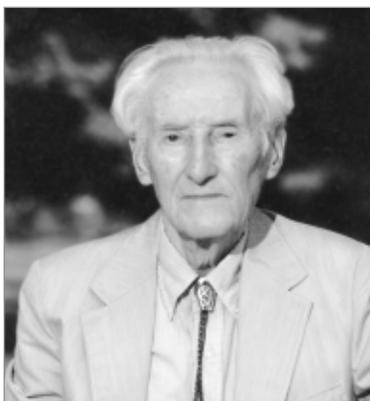
**Read more** The PROMYS Web site at [math.bu.edu/people/promys/](http://math.bu.edu/people/promys/) includes information for students, teachers, and counselors, an application, photo albums, and an alumni database.



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## AMS MEMBER NEWSLETTER

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### Arnold Ross, 1906–2002

**“Think deeply of simple things.” (Ross Summer Program motto)**

Last fall, the mathematics community lost one of its most innovative and tireless advocates. Recipient of the AMS Citation for Public Service in 1998 and the MAA Award for Distinguished Service in 1986, Ross may be best known for the summer program he founded that has enriched the lives of over 2000 mathematically talented high school students in its 45 years of existence. Ross directed and taught in the program every summer until a stroke prevented him from doing so two years ago.

The Arnold Ross Lecture Series is an AMS program named in Ross’s honor in which outstanding mathematicians present lectures to groups of high school students. The Ross legacy includes not only the lecture series and his program at Ohio State University but also similar programs created at the institutions of former program participants, now mathematicians themselves.

**Read more** Read the “Interview with Arnold Ross”, by Allyn Jackson, in the *Notices of the AMS* (August 2001, page 691, or online at [www.ams.org/notices/200107/fea-ross.pdf](http://www.ams.org/notices/200107/fea-ross.pdf)) and learn about the most recent and past Arnold Ross Lectures at [www.ams.org/meetings/ross-lect.html](http://www.ams.org/meetings/ross-lect.html).