FOCUS

THE NEWSLETTER OF THE MATHEMATICAL ASSOCIATION OF AMERICA

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In This Issue

Twenty-Three Mathematicians Win 1998 Section Awards for Distinguished Teaching

By Henry Alder

Twenty-three mathematicians won this year's Section Awards for Distinguished Teaching, which were conferred at the spring meetings of their sections. The latest winners represent the seventh group of awardees since the inception of the awards in 1992.

The Committee on the Deborah and Franklin Tepper Haimo Awards for Distinguished College or University Teaching of Mathematics has nominated at most three of these winners for the national Deborah and Franklin Tepper Haimo Awards. The MAA's Board of Governors acted on the nominations at the summer meeting in Toronto, and the national award winners will speak of their successes as teachers at the annual meeting in San Antonio in January, 1999.

That 23 of the MAA's 29 sections selected awardees speaks well of the sectional support for the national effort to identify, reward, and honor outstanding college teachers of mathematics in the United States and Canada. The national committee commends the sections for their efforts. Some sections routinely invite their award winners to address their section, and the national committee welcomes this practice as well as other ways of sharing the talents of these outstanding teachers.

Still, there are a few sections that do not give awards. The national committee urges these sections to nominate and reward outstanding teachers, and encourages all members of the Association to nominate worthy candidates. You may even nominate someone not in your section by writing to that person's section committee.

The larger the pool of outstanding nominations, the easier it will be to maintain the high standards for sectional and national awards. Hopefully, this fall every one of the MAA's 29 sections will have a nomination and selection procedure in place.

See *Awardees* on pages 8 & 9

Andreescu Appointed Director of American Math Competitions

Titu Andreescu has been appointed Director of the American Mathematics Competitions. Andreescu, who serves as chair of the USA Mathematical Olympiad Committee and head coach of the United States' team to the International Mathematical Olympiad, will assume the position in January, 1999. He will replace Walter Mientka, who has served as executive director of the competitions since 1975.

For more, see MAA Online http://www.maa.org.

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Mathematical Breakthrough: Melanie Wood Becomes First Girl Ever to Win Spot on the United States Mathematical Olympiad Team

For the first time in history, a high school girl made the USA Mathematical Olympiad (USAMO) team. Melanie Wood, a junior at Park Tudor High School in Indianapolis, not only made the 1998 team, she tied for the first place slot with sophomore Sasha Schwartz (Radnor High School, Radnor, PA).

The other US team members (in alphabetical order) were Reid Barton, home schooled, Arlington, MA, grade 9 equivalent; Gabriel Carroll, Oakland Technical High School, Oakland, CA, grade 9; Kevin D. Lacker, Sycamore High School, Cincinnati, OH, grade 12; and Paul A. Valiant, Milton Academy, Milton, MA, grade 9. (The alternates were David T. Vickrey, Vermillion High School, Vermillion, SD, grade 12; and David E. Speyer, Choate Rosemary Hall, Wallingford, CT, grade 12.)

In late July, the USAMO team traveled to Taipei, Taiwan, to compete in the International Mathematical Olympiad (IMO).

A series of three challenging mathematical competitions was used to select the USAMO team. In March, more than 350,000 students participated in the American High School Mathematics Examination, the first of the competitions. Two exams and dozens of tough problems later, the six-member team and two alternates emerged as the top mathematics students in the USA.

The examinations were administered by the American Mathematics Competitions, a program of the Mathematical Association of America.

Professor Gerald Alexanderson, President of the MAA, was delighted by the results. "The achievement of Wood and Sasha Schwartz comes at an important time, as we seek to improve the mathematical education of all students.

The eight winners of the USAMO are living proof that we have in our schools some of the very best mathematics students in the world. Melanie will be an inspiration to girls around the country. We believe that she is only the first of an increasing number of American girls achieving at the highest levels in mathematical competitions in the United States and internationally."

Professor Walter E. Mientka of the University of Nebraska has served as Executive Director of the American Mathematics Competitions for twenty-three years. He said, "Melanie Wood's achievement is a real breakthrough. I look forward to a much larger presence of girls on future USAMO teams."

Titu Andreescu has been Head Coach of the USA IMO team since 1995. In 1996, the USA IMO team under Coach Andreescu finished second in the International Mathematics Olympiad. "I, too," said Andreescu, "am excited by the breakthrough." The future "looks very bright for the performance of the USA team in the International Mathematical Olympiads of 1999, 2000, and 2001." ■

Results of the 1998 IMO can be found on MAA Online, http://www.maa.org.

Photograph by Robert Allen Strawn.

Standing outside the National Academy of Sciences are the 1998 USA Mathematical Olympiad Winners; left to right: Gabriel D. Carroll, Paul A. Valiant, Kevin D. Lacker, Melanie Eggers Wood, Sasha Schwartz, David T. Vickrey, David E. Speyer, and Reid W. Barton.

President's Report: Mathfests and Other Business

By Gerald L. Alexanderson

I'm pleased to report that the MAA's hard-working and inspired program committees came up with lists of principal speakers at the Toronto Mathfest (as well as the upcoming annual winter meeting) that will be hard to top. Toronto's list of speakers included Nathaniel Dean, Joe Gallian, Ross Honsberger, Andrew Odlyzko, Henry Pollak, Don Saari, Jean Taylor, and Margaret Wright. That's not even counting the people in the special sessions, the minicourses, and a short course on magic!

The future of Mathfests remains complicated, however, if not downright difficult. Since the AMS's decision not to meet with us during the summers, at least through the year 2000, the MAA has had to arrange summer meetings with the cooperation of sibling organizations like PME, NAM, AWM, and the Canadian Mathematical Society. And, since our Toronto meetings overlapped with SIAM meetings, our members were able to enjoy SIAM events as well.

Mathfest 1999 is set for Providence, but for the year 2000, we face problems due to the fact that there are other meetings: the International Congress on Mathematical Education in Japan and the special AMS meetings at UCLA marking the beginning of the new century. We are still planning a Mathfest for the year 2000 that would allow members to attend both the Mathfest or the UCLA event. We are grateful to our Associate Secretaries and the Washington staff for their patience and hard work in putting these Mathfests together.

Summer meetings will not be the same for many of us, however, without Jim Leitzel's cheerful presence and his enthusiasm. As a member of the Board of Governors Jim's wise counsel and boundless energy will certainly be missed. Given the range of his contributions, it will take a whole army of new volunteers to replace him.

Fortunately, Project NExT has the steady hand of Chris Stevens to guide the Project through a difficult transition period. We're hearing of new Project NExT-type activities being developed within the Sections, and that's good news. At our Northern California Section meeting this past spring, I was struck by how absolutely essential the Sections are to the health of this organization. For many members, the work of the Sections is their only direct contact with the MAA, aside from receiving a journal or two, of course. There is an amazing range of good activities going on in the Sections—and there are stellar programs at Section meetings too. So, Section officers out there, keep up the good work!

There is also a national side to the MAA, as we all know, and this is housed in offices in Washington, DC. The historic townhouses off Dupont Circle that house our Washington staff are beautiful and inviting and, after the renovations of a few years back, safe. But the buildings are old and bad things happen to old buildings, particularly where extremes of weather can cause damage. Terra-cotta decorations on the Vaughn building have deteriorated over time, probably due to ice, and the balcony over the front entrance has been looking more and more unsightly. So we have authorized some fairly expensive but necessary work to bring the building back up to a presentable state and one that will avoid further deterioration. Such work is, unfortunately, never ending, as those of us who are homeowners know all too well.

The American Mathematics Competitions (AMC) are coming into a transition period as we proceed with a search for a new Director of the Competitions. The current Executive Director, Walter Mientka, has been selected to organize the International Mathematical Olympiad 2001, to be held in the United States. It is difficult to imagine the AMC without Walter's ever-present direction, but it's also difficult to imagine an IMO in the United States without the benefit of his vast experience.

I am reluctant to bring up a cautionary note, but we are all aware of the desperate employment picture for young mathematicians who seek academic positions. Our Project NExT aims to make new PhDs entering the field more attractive to potential employers. We recently have received recommendations for action from our Task Force on Graduate Students. The MAA has to do what it can to help alleviate the very depressing problem of having too many applicants for too few positions. At the same time there are ominous portents on the horizon (see Garfunkel and Young, "The Sky is Falling," in the February 1998 issue of the *AMS Notices*). I urge all of our members in the academic world to be vigilant in maintaining good relations with other departments and schools on your campus that require service courses from the mathematics department. If we are not careful, we could find a lot of our courses being taught outside mathematics departments. That's not good for mathematics.

President Gerald L. Alexanderson

And here I am beyond the limit of space available for this report, and I haven't even touched on my favorite topic, publications. Well, all you have to do is look at the back pages of one of our journals to see that there is a lot of good material being published by the MAA. We have other good news in the publications area: we have new editors for *Math Horizons* and from all indications we'll be seeing lively new issues of *MH* well into the future. ■

Preliminary Announcement of MAA Contributed Papers Sessions in San Antonio

The organizers listed below are soliciting contributed papers pertinent to their sessions; proposals should be directed to the organizer whose name is followed by an asterisk (*). For additional instructions, see the Submissions Procedures.

Sessions generally limit presentations to ten minutes, but selected participants may extend their contributions up to twenty minutes. Each session room contains an overhead projector and screen; black boards will not be available. You may request one additional overhead projector, a 35-mm slide projector, or a 1/2 inch or 3/4 inch VHS VCR with one color monitor. Persons needing additional equipment should contact, as soon as possible, but prior to October 2, 1998: Jim Tattersall, Department of Mathematics and Computer Science, Providence College, Providence, RI 02918, e-mail: tat@providence.edu.

The Use of Technology in Teaching Abstract Mathematics

This session will be a forum for the exchange of ideas among those using computational tools in the teaching of traditionally abstract mathematical topics. Courses affected might include discrete mathematics, abstract algebra, number theory, logic, or analysis. Of particular interest are tools which are built upon standard programming languages or computer algebra systems since these might be used by a wide audience with minimal additional resources.

Wednesday and Friday mornings
Doug Ensley (*)
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Shippensburg University
Shippensburg, PA 17257
phone: (717) 532-1431
fax: (717) 530-4009
e-mail: deensl@ship.edu.

Quantitative Literacy

The session seeks papers describing quantitative literacy (QL) programs—programs at colleges that ensure literacy for ALL graduates. Also considered will be papers describing lower division courses, which could be recommendations on QL which will appear on MAA Online.

Wednesday and Friday mornings
Barbara Jur (*)
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Macomb Community College
14500 Twelve Mile Road
Warren, MI 48093
phone: (810) 445-7105
fax:(810) 445-7298
jur@macomb.cc.mi.us
Rick Gillman, Valparaiso University
Jimmy L. Solomon
Allen E. Pulsion
College of Science and Technology
Linda Sons
Northern Illinois University

Submission Procedures for MAA Contributed Papers

Send the name(s) and address(es) of the author(s) and a one-page summary of your paper directly to the organizer—indicated with an (*). In order to enable the organizer(s) to evaluate the appropriateness of your paper, include as much detailed information as possible within the one-page limitation.

Your summary must reach the designated organizer by Friday, September 4, 1998. *Submission of proposals via e-mail is preferred.* The organizer will acknowledge receipt of all summaries. If the organizer accepts your paper, you will receive instructions about preparing an abstract. Please submit completed abstracts to the AMS by Thursday, October 1. Abstracts received after the deadline will not be included in the booklet of abstracts that will be available in the meetings registration area during the meeting in San Antonio.

Teaching Statistics: Teaching the Reasoning and New Technological Tools

The teaching of statistics has been evolving in recent years. This session will address two important aspects of that evolution. Some authors will discuss experiences teaching statistical reasoning in a variety of undergraduate settings, from 'Statistics I' to the interdisciplinary course. Other authors will discuss novel ways in which they use technology in their courses, possibly including Java-based applet simulations, the TI calculator and the CBL, or interactive uses of the Web.

Wednesday and Friday mornings
Dex Whittinghill(*)
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e-mail: whittinghill@rowan.edu
Frank Wattenberg
National Science Foundation
Mary Parker
Austin Community College
Don Bentley, Pomona College

Mathematics Competitions

There are many ways to pique students' interest in mathematics through problem solving. The major national competitions are well known (Putnam and Mathematical Competition in Modeling at the college level; AHSME, AIME and USAMO for high schools) but there are many others that challenge activities of differing sorts and varying geographical sweep. The session seeks talks on various aspects of different sorts of competitions, at both the precollege and college level. What is your format? How did you get started? How is it funded? How are minorities encouraged? Have you done any follow-up on participants? Do you use the Internet? The MAA Committee on Local and Regional Competitions is running this Special Session as part of a thrust that may also include development of a data base on challenge events and a publication that will provide advice for people wishing to begin or improve such events.

Wednesday and Friday mornings
Harold B. Reiter (*)
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University of North Carolina Charlotte
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phone: (704) 510-6461
fax: (704) 510-6415

e-mail: hbreiter@email.uncc.edu
Stephen B Maurer
Swarthmore College
William P. Fox, USMA
Susan Schwartz Wildstrom
Montgomery County Schools, MD

Innovations in Teaching Abstract Algebra

This session invites papers about challenges and opportunities in making abstract algebra more accessible, meaningful, and applicable for our students while maintaining a major goal: to develop mathematical maturity by gradual introduction and development of concepts and careful and rigorous treatment of definitions and proofs. Where appropriate, each presenter is encouraged to describe the context for the talk (where does this fit into an abstract algebra course and what topics have been covered), the technology (if any) required, the method(s) implemented (demonstration, group work, discovery approach, outside project, etc.), and the effect (how did this impact conceptual understanding) of the innovation being discussed.

Wednesday afternoon
Vesna Kilibarda (*)
School of Education
Liberal Arts, and Science
University of Alaska Southeast
11120 Glacier Highway
Juneau, AK 99801-8671
phone: (907)n465-6408
fax: (907) 465-5159
e-mail: jfvk@acad1.alaska.edu
Allen C. Hibbard
Central College
Ellen Maycock Parker
DePauw University

Ethical, Humanistic, and Artistic Mathematics

This session will feature talks that relate mathematics and mathematics teaching to the culture in which they are embedded. Papers discussing any of the three following themes are welcome: (a) ethical dilemmas and considerations in mathematics, (b) humanistic mathematics, (c) teaching mathematics to art students integrating an iconistic approach, guided inquiry, or any other philosophy or methodology. Please state which of the three themes your paper addresses.

Wednesday and Friday afternoons
Alvin White (*)
Department of Mathematics
Harvey Mudd College
Claremont, CA 91711-5990
phone: (909)621-8867
fax:(909) 621-8366
e-mail: awhite@hmc.edu
Robert P. Webber, Longwood College
Stefanos Gialamas
Illinois Institute of Art

Proof in Mathematical Education

This session invites papers that focus on topics related to proof of current interest in undergraduate mathematics education. For example: Students'/Teachers' views on proof. How do students learn to prove theorems? How do students see "doing" proofs? How do they make the transition from strictly algorithmic activity to definition-theorem-proof?

Friday afternoon
Joseph Wimbish (*)
Department of Mathematical
Education and Computer Sciences
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1500 East Fairview Avenue
Montgomery, AL 36106-2148
phone (334) 833-4476
fax: (334) 283-5413
e-mail: jwimbish@huntingdon.edu
Gary Davis
Research & Graduate School
of Education
University of Southampton

Geometry in the Classroom in the Next Millennium

Geometry, one of mathematics' oldest branches, has exciting new applications! This session welcomes papers on innovations in teaching college geometry at all levels, including courses for liberal arts, undergraduate majors (where students may be future researchers), and for preparing future and in-service K-12 teachers. We encourage presentations illustrating the evolving nature of geometry, its interaction with science and technology, its role in the curriculum, the incorporation of new results, pedagogical issues, and the use of technology.

Thursday and Saturday mornings
Colm Mulcahy (*)
Department of Mathematics
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Spelman College
Atlanta, GA 30314
phone: (404) 223-7627
fax: (404) 223-7662
e-mail: colm@spelman.edu
David Henderson, Cornell University
Barry Schiller, Rhode Island College

Discrete Mathematics Revisited

Before Calculus Reform discrete mathematics was going to save undergraduate mathematics. This session will focus on ways in which discrete mathematics can serve as an entry into the curriculum, how it serves client disciplines such as biology and computer science, and how specific topics have influenced undergraduate research. Of special interest are constructive approaches to learning, discrete models, and the use of technology in the communication, doing, and teaching of discrete mathematics.

Thursday and Saturday mornings
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phone: (612) 696-6338
e-mail: molnar@macalester.edu
Suzanne M. Molnar
College of St. Catherine

Projects That Work in Applied Mathematics Courses

Typically, a large number of students in applied mathematics courses are not mathematics majors. This session presents examples of interdisciplinary projects that link the students' major fields of study to applied mathematics. Applied problems drawn from such fields as engineering, physics, biology, chemistry, music, graphic design, and others that enliven the presentation of important mathematical concepts will be included. Projects that resulted from interdisciplinary research and team-

teaching are particularly appropriate.

Thursday and Saturday afternoons
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fax: (336) 334-7283
e-mail: kurepaa@ncat.edu
Henry Warchall
University of North Texas.

Innovative Use of Distance Learning Techniques to Teach Post-Secondary Mathematics

The purpose of this session is to present teaching methods in mathematics using distance learning. Examples of existing distance education programs, as well as new and innovative techniques, are solicited. Of particular interest is a discussion of successful models of distance learning, and also an analysis of concerns and difficulties experienced by educators who work in this medium. This session is organized on behalf of the MAA Committee on Computers in Mathematics Education.

Thursday and Saturday afternoons
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fax: (514) 398-3876
e-mail:
smithb@management.mcgill.ca
Marcelle Bessman
Jacksonville University

Integrating Mathematics and Other Disciplines

Papers are invited describing: a) undergraduate courses or programs that are interdisciplinary in nature or b) model examples of how applications of mathematics in other professions can be incorporated into undergraduate mathematics courses. Interdisciplinary courses should have a substantial mathematical component and a direct link to a discipline other than mathematics. Model examples of applications from other disciplines should show how the incorporation of these applications enhances mathematical understanding, and increases the usefulness of the course to students not majoring in mathematics. These other disciplines might include the physical sciences, engineering, the social sciences, the arts and the humanities. The session is organized on behalf of the CUPM Subcommittee on Calculus Reform and the First Two Years.

Thursday and Saturday afternoons
William McCallum (*)
Department of Mathematics
University of Arizona
Tucson AZ 85721
phone: (621) 520-6886
e-mail: wmc@math.arizona.edu
Nicholas Losito, SUNY Farmingdale
Yajun Yang, SUNY Farmingdale

The Integral Role of the Two Year College in the Preservice Preparation of Elementary School Teachers

Two year colleges have an integral role in the preparation of elementary school teachers, given the many students who complete their mathematics content course requirements at a community college. This session invites presentations which describe innovative practices and activities that focus on the strengthening of undergraduate content courses, the recruitment of students into teacher preparation programs, and other implementation initiatives. We are particularly interested in reports of collaborative models developed in partnership by two-year colleges and four-year institutions, as well as other joint activities which have been beneficial to both parties.

Thursday and Saturday afternoons
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Palatine, IL
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fax:(847) 925-6049
e-mail: mmcgowen@harper.cc.il.us
Joanne Peeples
El Paso Community College
William E. Haver
Virginia Collaborative for Excellence in the Preparation of Teachers.

New Math Horizons Editors

Photo courtesy of Brian Hsi

The MAA's Board of Governors has elected Deanna Haunsperger and Stephen Kennedy, both at Carleton College, as Co-editors of Math Horizons. As founding editor Don Albers's successors, they will serve as editors of the popular student publication from January 1, 1999 to January 1, 2004.

Call Goes Out for Contributed Papers Proposals for Mathfest 1999 and Year 2000 Joint Meetings

The MAA Commitee on Sessions of Contributed Papers selects the topics and organizers for the contributed papers sessions at Mathfests and at the national meetings. The committee would be delighted to hear from MAA members who are interested in organizing sessions or who have suggestions for topics.

Planning is now underway for the August 1999 Mathfest in Providence, Rhode Island, on July 31 to August 2, and for the Joint Meetings in Washington, D.C., on January 19-22, 2000. The deadline for receipt of proposals for the Providence Mathfest is October 2, 1998 and for the joint meetings it is December 31, 1998.

Send (preferably by e-mail) proposal title, name(s) and address(es) of the organizer(s), and a one-page summary to the chair of the committee, Howard Penn.

E-mail: hlp@sma.usna.navy.mil.
Address: Department of Mathematics, U.S. Naval Academy, Annapolis, MD 21402.

Phone: (410) 293 6702.
Fax: (410) 293 4883.

Math Ed Group Sets First Meeting for San Antonio, Seeks More Members, Invites Speakers

The first meeting of the Association for Research in Undergraduate Mathematics Education (ARUME) will be held in conjunction with the joint annual meetings of AMS and MAA in San Antonio in January 1999.

ARUME hopes to foster a professional atmosphere for supporting and encouraging quality research in the teaching and learning of undergraduate mathematics.

MAA members are welcome to join and to submit papers for presentation.

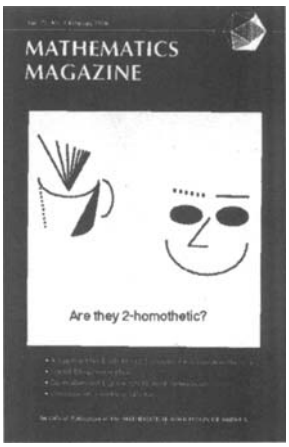
ARUME's program will include a business meeting to organize the election of officers, an expository talk on the state of research in undergraduate mathematics education, and presentations exemplifying current research. A reception will follow the business meeting.

Research papers that address issues concerning the teaching and learning of undergraduate mathematics are invited for short presentations at the ARUME meeting. Both theoretical and empirical investigations using qualitative or quantitative methodologies are appropriate. Whenever possible, these should be set within established theoretical frameworks and should further already existing work. Reports on completed studies are especially welcome.

All who are interested in making 15-20 minute presentations are asked to send one-page outlines of their proposed talks to: Julie M. Clark, Davidson College, Davidson, NC 28036, e-mail: jmclark@ehc.edu; or Annie Selden, Department of Mathematics, Box 5054, Tennessee Technological University, Cookeville, TN 38505, e-mail: SELDEN@tntech.edu.

The deadline for submissions is September 15. ■

Math Magazine Committee Seeks Readers' Feedback



The MAA's ad hoc *Mathematics Magazine* Study Committee would like to hear from readers of the *Magazine*. This committee was appointed by the MAA Coordinating Council on Publications to deliver a review of the *Magazine* by November 1998, prior to the selection of a new editor. To maintain the tradition of excellence in the publication, the committee is interested in answers to the following:

- How can the Web be used to make *Mathematics Magazine* more interesting and useful?
- What kinds of Articles, Notes, Reviews, Problems, etc. and subjects about mathematics would readers like to see?
- How useful is the *Magazine* to students?
- How do readers perceive the relationships between *Mathematics Magazine, The College Mathematics Journal,* and *The American Mathematical Monthly*?
- What are examples of articles that readers liked, or disliked, and why?
- Are there ways in which *Math Magazine* can be made more faithful to the word "magazine"?

The following committee members are waiting to hear from you:

Jerry Alexanderson (galexanderso@scuacc.scu.edu); Irl Bivens, Chair, (irbivens@davidson.edu); David Bressoud (bressoud@macalester.edu); Judith Grabiner (jgrabiner@pitzer.edu); Jeff Lagarias (jcl@research.att.com); and George Mackiw (mackiw@mailgate.loyola.edu). Paul Zorn (*Mathematics Magazine* editor) serves as consultant to the committee. ■

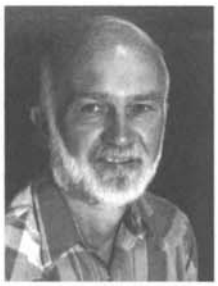
1998 Award Winners

Don Pfaff
University of Nevada, Reno

Dave Skoug
University of Nebraska-Lincoln

Joan P. Hutchinson
Macalester College

Charles H. Jepsen
Grinnell College



Monte J. Zerger
Adams State College

Gholam Ali Zakeri
California State University, Northridge

Frederick W. Stevenson
University of Arizona

Efraim P. Armendariz
University of Texas, Austin

Walter Kelley
University of Oklahoma

Call for Nominations for 1999 Awards

Nominations for the Section Teaching Awards for 1999 should be submitted to the appropriate section officer in accordance with your section's procedures and deadlines. Nomination forms from section secretaries should reach department chairs and MAA liaisons by October 9. If your chair has not received the form by then, check with your section secretary or other appropriate section officer.

for Distinguished Teaching

Gary L.Britton
University of Wisconsin

Jerry Uhl
University of Illinois

Donald A. Buckeye
Eastern Michigan University

David W. Kinsey
University of Southern Indiana

Robert W. Case
Northeastern University

Robert Rogers
SUNY College at Fredonia

Virginia Lee
Brookdale Community College

James P. Crawford
Lafayette College

Thomas Hern
Bowling Green State University

Virginia Lyn Stallings
American University

James H. Wells
University of Kentucky

Joel V. Brawley
Clemson University

Robert E. Kennedy
Central Missouri State University

Karen Thrash
University of Southern Mississippi

* Section membership totals as of June 1998. (Does not include international members and other special categories.)

1997 CONTRIBUTORS TO MAA PROGRAMS AND SERVICES

Annually hundreds of members give donations to the Greater MAA Fund to support MAA programs and services that are enriching our entire community and profession.

These special programs develop and support new mathematicians and increase the skills and opportunities for those working in mathematics education. The Board of Governors, officers, and staff thank each of you for your contribution.

Due to a great increase in the number of donors giving to the Greater MAA Fund and limited space in FOCUS, we had to narrow this list to those who gave $50 or more.

If any of the information below is incorrect, please contact Carol Shaw, Director of Development, at (202) 387-5200.

Grand Benefactors

Richard D. Anderson, Tom & Jane Apostol, Alice Beckenbach, Mary L. Boas, Herbert & Binnie Baruch, Jean & Sylvia de Valpine, Ellen Evans, Andrew Gleason, Anna S. Henriques, Richard Hord, Everett Pitcher, Michael M. Rubenstein, Maria W. Steinberg, Robert Steinberg.

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Letters to the Editor

To the Editor:

I am reacting to the announcement in FOCUS [February 1998, p. 6] that "Supported by the NSF, the MAA is conducting a series of faculty development workshops designed for mathematicians who teach courses in introductory statistics but have little formal training in the subject."

What a wonderful idea to help teachers teach a subject they don't know. We used to joke about the football coach teaching mathematics. I call your attention to a classic 1940 paper by Harold Hotelling, entitled, "The Teaching of Statistics," in which he discusses various aspects of the teaching of statistics. For starters, he notes, "Qualifications of a good teacher of statistics include, first and foremost, a thorough knowledge of the subject." This is not the result of a workshop or an IV of examples.

There are several implications in the announcement, including that some mathematicians without formal training in statistics are teaching statistics, and that it is within the province of mathematics departments to permit mathematicians who don't know statistics to teach statistics.

I thought battles about who teaches statistics were resolved long ago. Perhaps not. I suggest the MAA, in conjunction with the IMS and the ASA, prepare a position paper on the teaching of statistics—who should teach it and what is an appropriate training program.

Ingram Olkin, Dept. of Statistics
Stanford University

To the Editor:

In their letter to the Editor (FOCUS, May/June, 1998), Dubinsky and Schoenfeld in their response to MacLane touch on a timely issue in the mathematical community, namely, the fairly widespread skepticism among research mathematicians about the value of the continuing boom in research in "the science of mathematics education."

In their letter the writers end up by implying that mathematicians are doing a disservice to the mathematical community when they express these doubts. They write, "Polarization in the discourse between mathematicians and mathematics educators is neither productive nor practical. It takes energy away from the important business to which we are all committed, that of improving mathematics teaching and learning at all levels."

It seems to me a better response would have been to give the skeptics a bit of guidance. Earlier they have written, "At its best, research in mathematics education offers better, deeper and increasingly more useful explanations of teaching and learning, and the contexts in which they happen." Very good, then why not list a few of these best papers and let the skeptics decide for themselves? Unfortunately, this possibility seems to have been foreclosed.

In the writers' words, "Just as one cannot learn mathematics by deciding to read some random assortment of papers, it is unlikely that people who do not have formal preparation in the field of mathematics education would find it fruitful to read only a few papers."

I find this a very bad analogy. It is exactly by reading not random but selected papers or books that a person becomes captured by mathematics in the first place. Think of the first time you understood why the real numbers are uncountable, or saw the proof of the Euler polyhedron formula, or—but the list is endless (figuratively).

I agree there are interesting and important issues in mathematics education but I'm pretty sure most of them can be intelligently understood even by a mere mathematician.

David Gale
University of California, Berkeley

To the Editor:

An addendum to the diplomatic letter of Ed Dubinsky and Alan H. Schoenfeld (FOCUS, May/June, 1998, pp. 8-9) on research in education. Their eighth paragraph pointed out the value of reviews of such research but failed to point out the existence of journals performing this function. *Education Studies in Mathematics, Journal for Research in Mathematical Education, Mathematical Gazette,* and *Zentralblatt für Didaktik der Mathematik* all do this.

Robert S.D. Thomas
University of Manitoba

EMPLOYMENT OPPORTUNITIES

KENTUCKY

CENTRE COLLEGE

The mathematics program anticipates a replacement position for a year and a half, starting full-time January 1999 through December 1999, and continuing part-time through May 2000. Candidates should have a Ph.D. in mathematics and a strong commitment to undergraduate teaching in a liberal arts college. Send resume, transcripts, and three letters of recommendation by September 1, 1998 to Dean John C. Ward, Centre College, 600 West Walnut Street, Danville, KY 40422-1394. EOE.

MASSACHUSETTS

WILLIAMS COLLEGE
Department of Mathematics
Williamstown, Massachuetts 01267

Anticipated tenure-eligible position in statistics, beginning Fall, 1999, probably at the rank of assistant professor. In exceptional cases, however, more advanced appointments may be considered. Excellence in teaching and statistics, including scholarship and consulting, and Ph.D. required. Applicants with emphasis in operations research will also be considered.

Please have a vita and three letters of recommendation on teaching and research sent to Hiring Committee. Evaluation of applications will begin November 15 and continue until the position is filled. As an EEO/AA employer, Williams especially welcomes applications from women and minority candidates.

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Located in the northeastern area of Metro Detroit, is seeking candidates for the full-time position of **Instructor of Mathematics.**

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Qualifications: A master's degree in mathematics or equivalent education. Relevant, recent teaching experience. Calculator skills necessary. Computer skills desirable.

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To receive application materials and the complete posting, call the Office of Human Resources (810) 445-7885 (Mon-Fri 8:30 – 4:00 EDT). You may also print an application form directly from our website at www.macomb.cc.mi.us. To ensure consideration, required application materials (Application for Employment, letter addressing how you meet the stated qualifications for the positions, transcripts, resume, and short statement about pedagogy) must be received by Thursday, September 3, 1998, at 4:00 p.m. The search will continue until the position is filled. AA/EEO Employer.

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Director of Developmental Mathematics Programs

Full time academic year position (mid August-mid June). The position is assigned to the Mathematics Department within the Division of Sciences. Staffing facilities, budget for programs, and administrative support are provided by the Mathematics Department and Instructional Innovation Center. The candidates must be able to teach a broad range of basic mathematical concepts and skills to a wide variety of students. Experience in using developmental approaches to the teaching and learning of mathematics is essential.

The college is in a period of change in areas of general education, science and mathemat-

ics pedagogy, and teacher education. The person in this position will be working with faculty and staff across the campus to implement possible changes in quantitative requirements. These changes may include a basic math skills component as well as the development of quantitative intensive courses.

Starting date preferably January 4, 1999, negotiable, but no later than August 2, 1999.

Responsibilities: develop and manage proficiency programs; teach workshops or courses related to mathematics development; supervise Math Center tutoring services, study group programs, and student supplemental instructors for mathematics courses; summer orientation advising for incoming students; support quantitative reasoning in non-math courses, related duties. **Qualifications:** Master's degree in Mathematics or Mathematics Education and at least 3 year's experience in developmental mathematics a the college level required. Appropriate doctorate desirable. Starting salary range: $28,290–$35,600. Send letter of application, resume, and three letters of reference addressing teaching, experience with developmental mathematics programs and leadership potential, and a statement of your philosophy of teaching developmental mathematics students to: Developmental Math Search Committee, Office of Human Resource Management, Keene State College, 229 Main Street, Keene NH 03435-1604. Review of applications to begin September 20, 1998 and continue until position filled. Keene State College is an AA/EEO employer and actively seeks women and minority candidates.

NEW YORK

NATIONAL RESEARCH COUNCIL
Teaching/Research Postdoctoral Awards in Mathematical Sciences of Physics at the United States Military Academy And Army Research Laboratory

Description: The U.S. Military Academy (USMA) at West Point, New York, and the U.S. Army Research Laboratory (ARL) invite applications for postdoctoral teaching and research associateships to be administered by the National Research Council (NRC). Applicants who are considered by USMA as qualified for teaching appointments in mathematics or physics will be invited to choose a research project and develop a proposal based on NRC approved research opportunity at ARL. The program provides three years of a combination of teaching and research during the academic year and research in the summers. Each associate has a teaching mentor and selects an advisor from the Army Research Laboratory to serve as a mentor and host for the postdoctoral research. The teaching requirement in mathematics at USMA involves teaching two sections (34 students) per semester in an undergraduate mathematics course (calculus, differential equations, dynamical systems, probability and statistics, etc.). **Eligibility:** The award competition is open to U.S. citizens who have earned a Ph.D. within the 5-year period preceding the award starting date, which should not be later than July 1, 1999. **Award amount:** The award includes a beginning annual stipend of $40,000, reimbursement for initial relocation to West Point, an allowance for professional travel, and subsidized health insurance. **Application information:** Applicants should send a curriculum vitae, graduate and undergraduate transcripts, a statement of teaching philosophy and career goals, research interests, and reference reports with three letters of recommendation by November 1, 1998, to: Department of Mathematical Sciences, ATTN: Personal Officer, United State Military Academy, West Point, NY 10996-1786. Applicants selected by the Department of Mathematical Sciences will be asked to submit research proposals for review by the National Research Council and the Army Research Laboratory.

Overviews of USMA and ARL are available on the WEB
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Questions: Mathematics: Call LTC Gary Krahn, Department of Mathematical Sciences, USMA: (914) 938-5870, or email: garykrahn@usma.edu. Physics: Call COL Thomas Lainis, Department of Physics, USMA, (914) 938-3014.

NORTH CAROLINA

NORTH CAROLINA STATE UNIVERSITY
Professor and Head
Department of Mathematics

The Department of Mathematics at North Carolina State University invites applications for the position of Professor and Head of the Department. The Department has 65 full time faculty, 12 visiting faculty and post docs, 106 graduate students, and 250 undergraduate majors, with annualized research expenditures in excess of $2 million. The Department has modern computing and communication facilities supporting research and instruction. It has strong research programs in both pure and applied mathematics, and collaborations with other departments and institutions. Members of the Department provide leadership for an interdisciplinary center, the Center for Research in Scientific Computation, that provides a focal point for research in computational science, engineering and applied mathematics. The Department and the Center jointly sponsor an industrial Applied Mathematics Program. For information about the department see: http://www.math.ncsu.edu.

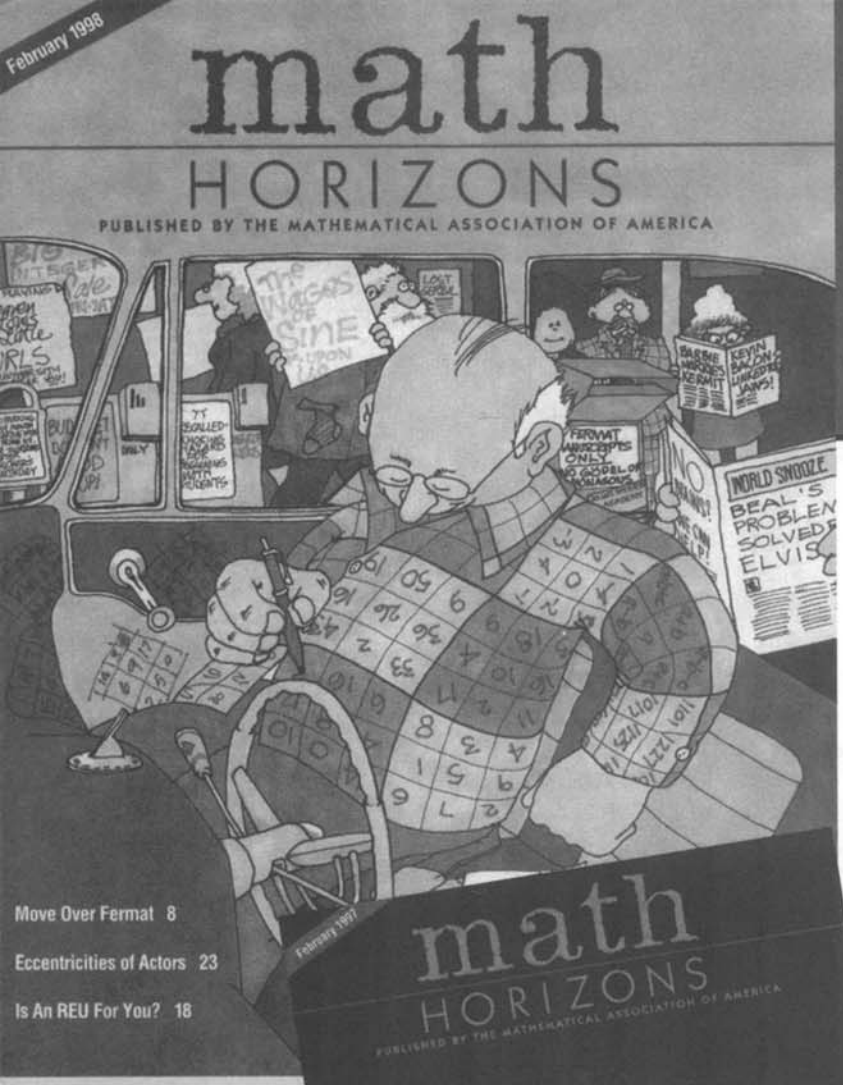
The Head is expected to establish high standards for the teaching and research programs of the Department, to maintain a vigorous program of scholarship and professional activity, and to have a balanced appreciation for teaching, pure and applied research, and outreach. The Head reports to the Dean of the College of Physical and Mathematical Sciences and is responsible for departmental administrative, budgetary, and personnel matters.

NCSU offers unique research opportunities for industrial-academic collaboration on the new Centennial Campus, a 700-acre site housing both university and industrial research facilities. Mathematics enjoys extensive interaction with other departments within the university and with nearby facilities in the Research Triangle Park through its Industrial Applied Mathematics program involving graduate students, postdocs, faculty, and industrial scientists. The Park is home to numerous industrial research campuses, the National Institute of Environmental Health Sciences, a major Environmental Protection Agency complex, the NC Microelectronics Center, and the NC Biotechnology Center. NCSU and the Research Triangle Park are located in a region regularly acclaimed in national publications as a great place to live.

Applicants should send a letter of interest, curriculum vitae, and the names of at least three references to:

Dr. Thomas M. Gerig, Chair
Mathematics Head Search
Box 8203
North Carolina State University
Raleigh, NC 27695-8203.

Questions may be directed to gerig@stat.ncsu.edu. Review of applications will begin July 15, 1998 and continue until the position is filled. North Carolina State University is an equal opportunity, affirmative action employer and especially solicits applications from women, under-represented minorities and persons who are physically challenged.



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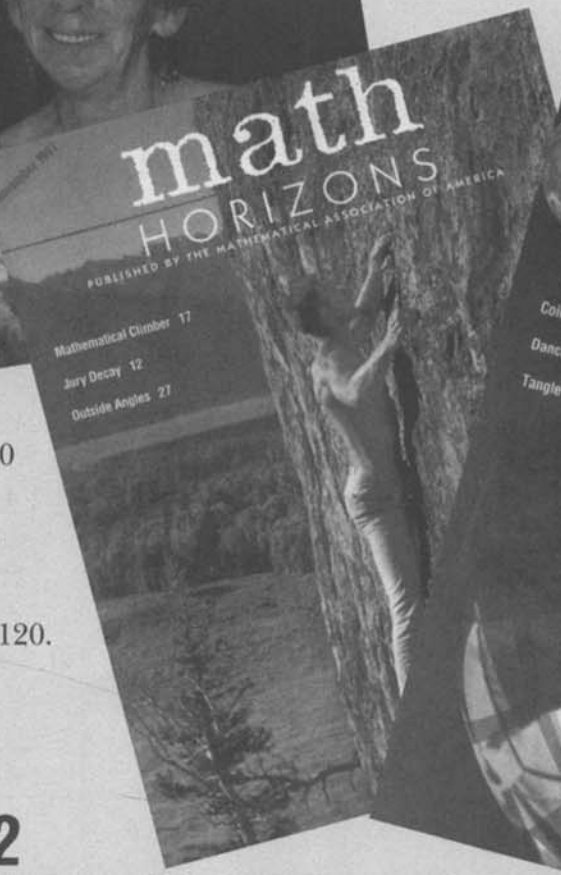

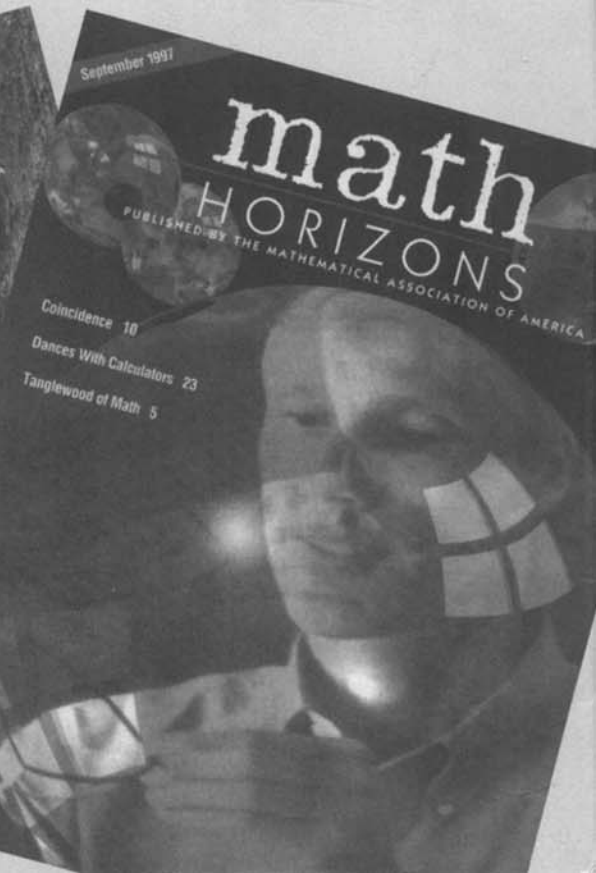

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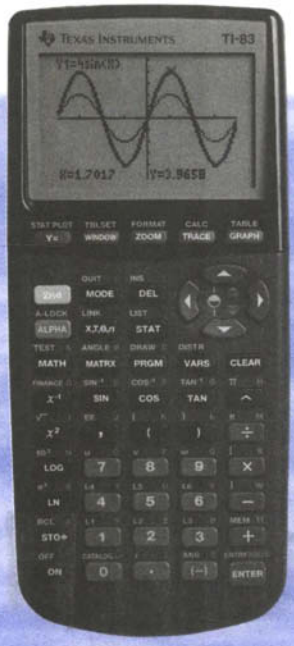

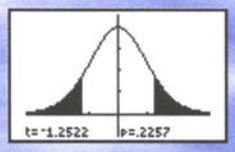

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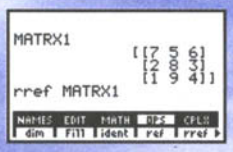

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