FOCUS

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Calling All Mathfest Organizers

The MAA Committee on Sessions of Contributed Papers selects the topics and organizers for the contributed paper sessions at Mathfests and at the national meeting. 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 Mathfest at UCLA, August 3–5, 2000, and for the Joint Meetings in New Orleans, January 10–13, 2001. The deadline for receipt of proposals for the Los Angeles Mathfest is July 31, 1999, and for the joint meetings is December 31, 1999.

Send or 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.

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The MAA Committee on Minicourses is soliciting proposals for new minicourses to be given at Mathfest 2000 at UCLA and the Joint Meetings in New Orleans.

Most minicourses are related to the undergraduate curricula, although any topic of interest to the MAA membership will be considered.

To receive more information on how to submit a proposal, to discuss your idea for a proposal, or to suggest a topic for a course you would like to take, contact Nancy Baxter Hastings, Department of Mathematics and Computer Science, Dickinson College, Carlisle, PA 17013; (717) 245-1626; e-mail: baxter@dickinson.edu. ■

Tom Banchoff to Give First Leitzel Lecture

The first Leitzel Lecture has been scheduled for Sunday, August 1, from 8:30 to 9:20 a.m. at the Mathfest in Providence, RI. The speaker will be MAA President Thomas Banchoff. His talk is called "Teaching Stages."

The Leitzel Lecture series was established in memory of Jim Leitzel, an active member of the MAA who contributed in untold ways to the Association and to the improvement of mathematics teaching.

The Leitzel Lectures are supported by the Leitzel Lecture Fund, whose endowment has now reached over $41,000. Over 400 donors have contributed to the fund.

For more information on the Leitzel Lecture Fund and on how you can make a donation to the MAA, see MAA Online (www.maa.org).

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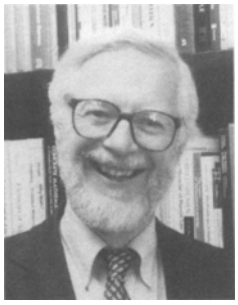
Proposed New Mission Statement Reflects Goals of MAA's Growth

Tom Banchoff



Last January, the MAA Board of Governors asked a group of officers, members, and staff to prepare a set of recommendations that would guide the Association in the first three years of the new century. In late March, a 19-member planning group devoted two days to setting priorities for the Association's future.

As part of the charge to answer the question, "Who are we and who are we for?" we formulated a new mission statement for the Association. The current mission statement reads, "To advance the mathematical sciences, especially at the collegiate level."

We will propose to the Board of Governors an expanded mission statement for the MAA, to read as follows:

"To promote communication, teaching and learning, and research in mathematics and its uses, especially at the collegiate level, for all who are interested in the mathematical sciences."

Reasons Why

We agreed that communication is one of our major activities and challenges. We already have successful journals at different levels meeting the needs of most members, and we will consider even more.

Our book publishing program is going well and promises to support the aims of our Association even more. These aims have helped to shape MAA Online as it grows and evolves into one of our most important sources of day-to-day information and into a forum for the discussion of issues of interest to members in general, and to subgroups of members with special concerns.

The interconnected activities of teaching and learning have been our focus from the inception of the Association. We continue to be the major voice supporting the efforts of individuals and departments to do an ever better job of this primary responsibility.

Many of our efforts will continue to involve cooperation with granting agencies and other organizations concerned with the advancement of our profession, particularly in the encouragement

see Mission on page 7

Edwin Moïse, Former MAA President, Dies at 79

Edwin Evariste Moïse, who served as MAA president, was a specialist in topology, author of numerous textbooks, and cryptanalyst in the Office of the Chief of Naval Operations during the Second World War. He died last December of complications following heart surgery.

Born in New Orleans, Moïse graduated from Tulane University in 1940. After receiving his Ph.D. in mathematics from the University of Texas in 1947, he taught at the University of Michigan (1947–1960) and was a member of the Institute for Advanced Study (1949–51). During his tenure at Harvard University (1961–71), Moïse served as the MAA's president in 1967-68. He was also vice-president of the AMS, a fellow of the American Academy of Arts and Sciences, and on the faculty of Queens College of the City University of New York (1971–87). He later devoted his time to studying 19th-century English poetry.

Moïse's books included *Elementary Geometry from an Advanced Standpoint* (Addison Wesley, 3rd edition, 1990), *Introductory Problem Courses in Analysis and Topology* (Springer, 1982), *Geometric Topology in Dimensions 2 and 3* (Springer, 1977), *Elements of Calculus* (Addison Wesley, 1972), *Number Systems of Elementary Math* (Addison Wesley, 1966), and *Calculus, Part I* (Addison Wesley, 1966).

On Becoming Editor of the *College Mathematics Journal*

Woody Dudley

The first thing you do is you feel humble. The tradition of MAA journals can be overwhelming. Think of the *Monthly*, more than one hundred years old! How many journals are older than that? Not very many. *The College Mathematics Journal* doesn't have quite that longevity, but it has published contributions from Paul Halmos, George Pólya, Ralph Boas, Peter Hilton, from Ivan Niven, H. S. M. Coxeter, two generations of Tuckers (Albert and Alan), Anneli Lax, Richard Guy, ...—from the first-magnitude luminaries, the novas even, of the profession.

How can any mere mortal presume to be able to carry on the tradition? The next thing you do is you get to work. The manuscripts come in (from authors who get no pay for their work) they go out to Associate Editors (who volunteer their services) and referees (who somehow make time to complete their difficult but necessary tasks). Editors of the sections of the CMJ—what would it be without Problems and Solutions?—turn in their material on time and in good shape.

Accepting and Rejecting Articles

The bad part of the job is having to turn papers down. An old acquaintance cut me semidead at the San Antonio meeting, probably because I had told him that the CMJ wouldn't publish his paper. The decision wasn't personal, nor was it much of a professional slight. Not many of the papers that come to the CMJ are rejected. A few are, but most that don't get published fail to be accepted. There's a distinction: rejected papers are bad, but ones that fail to be accepted aren't. There just isn't room to publish all that I would like to.

In an ideal world, one where there was a larger market and audience for mathematical work, many more papers that are sent to the CMJ would be published than are now. (If anyone knows of a foundation that wants to do good by making a grant to the CMJ so that it can have at least five times as many pages as it does now and publish monthly—weekly might be a bit much—let me know and I'll apply.)

Until the grant comes through, I suppose I'll continue to get phone calls like the one that came last week from a failed-to-be-accepted author. He had sent his piece to the *Monthly*, but it was too long for the Notes section. *Mathematics Magazine* said that its level was too low and I had said it was too high. "But this is new," the author said, "and people should know about it." He's right, but they may not.

Turndowns are a part of mathematical life. I once sent a paper to an editor on Monday and it came back (this was in prephotocopy days, when manuscripts were returned) on Thursday. Or maybe it wasn't until the next Monday, but it was definitely a rejection. My file labeled "unpublished manuscripts" is large. Maybe the world can do without my uniformitization of a result of Erdos, but my new proof of a theorem of Fejér was clever, and the editor who failed to accept my piece on Cauchy was a real idiot. It's hard, on both sides of the fence, to have a paper turned down.

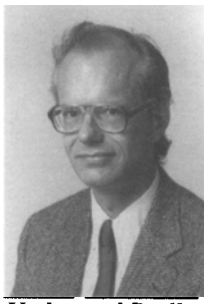
Getting Respect

Wow, do authors give editors respect! I don't get it from my wife, children, or colleagues—they all know better—and after a few weeks of class the veneer wears thin with some students. It's different with authors: I can tear their work to shreds, sending it back to them with red marks all over their pages, and they'll return it, having made all the changes, and say that they're grateful. It's wonderfully ego-building.

So is seeing a printed CMJ, my baby, out there in the world on its own. I did that! Of course that's nonsense. It's the authors, the referees, the Associate Editors, the compositors, the printers: they're the ones who make it happen, not me, and if I didn't exist the CMJ would have come out anyway. But, irrational as it is, the feeling is still there, and it's a nice one to have.

The CMJ Reader

I think of the typical reader of the CMJ as being a hard-working calculus teacher who, after a day of teaching three classes, going to a committee meeting, conferring with two students who wanted to know what will be on the next test, and grading twenty-five examinations (some of them dreadful), picks up the CMJ with the hope of finding something that will be interesting, informative, or both. There'll be a commemoration of the 200th anniversary of the death of Maria Agnesi, "the first woman in the Western world who can legitimately be called a mathematician" (Alexander Hahn), there'll be a paper on the subtleties of calculus, such as the function which doesn't have a point of inflection at a point where its derivative is zero and is positive on either side. Media Highlights and Fallacies, Flaws, and Flimflam, Software Reviews, and the other sections of the CMJ will continue to appear.



Underwood Dudley

I hope to add a section called "Miscellanea" (or something like that). It will contain, well, miscellaneous items. For example, in the *New York Times* a while ago there was a book reviewed that had in it the information that in some society "75% of the wealth was in the hands of the top 20% of the population, and the lowest 20% had only 6%." It's a difficult exercise to assign the percentages of wealth in the 4th, 3rd, and 2nd quintiles, call them a, b, c, so that $6 < a < b < c < 75$ and $6 + a + b + c + 75 = 100$. Pointing out slips like that won't make them go away, but it can't do any harm either. If anyone notices anything like that, or anything else that would be of general interest, let me know.

MAA Journals

MAA journals contain riches. When John Ewing was compiling his splendid *A Century of Mathematics: Through the Eyes of the Monthly* (MAA, 1994; make sure that your school library has a copy) I was assigned the decade of the '40s to go through and pick out items that might be included. There was an amazing amount of material that cried out to be reprinted, much more than there was room for. The next time you're stranded on a desert island, you could do worse than take along bound volumes of *the Monthly, Mathematics Magazine*, and the CMJ. ■

Preliminary Announcement of MAA Contributed Papers Scheduled for Washington, D.C., Meeting in January 2000

The organizers listed below solicit contributed papers pertinent to their sessions; proposals should be directed to the organizer whose name is followed by an asterisk (*). 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. Persons needing additional equipment should contact, as soon as possible, but prior to October 5, 1999: the session organizer and Jim Tattersall, Department of Mathematics and Computer Science, Providence College, Providence, RI 02918, e-mail: tat@providence.edu. Please note that the dates scheduled for these sessions remain tentative.

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 Thursday, September 9, 1999. 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 Tuesday, October 5, 1999. Abstracts received after the deadline will not be published in the booklet of abstracts available in the meetings registration area during the meeting in Washington, D.C.

The Use of History in the Teaching of Mathematics

This session invites contributions from individuals to describe how they have used the history of mathematics in innovative ways in the classroom to motivate students or to support changes in curriculum and pedagogy. Ideas about the use of history to prepare future teachers are especially encouraged. Also invited are contributions discussing new and interesting ways of teaching history of mathematics classes. Ideas about how to get students actively involved are especially encouraged.

Wednesday and Thursday mornings
Florence Fasanelli (*)
College-University Resource Institute
4711 Davenport St. NW
Washington, DC 29916
phone: (202) 966-5591
e-mail: ffasanelli@juno.com

V. Frederick Rickey, U.S.M.A. at West Point
Victor J. Katz, University of the District of Columbia

Integrating Mathematics and Other Disciplines

The session will present: discussions of the content of current mathematics courses in the first two years in the light of the way other disciplines use mathematics and the expectations they have of our students, discussions of how applications of mathematics in other disciplines can be incorporated into mathematics courses in a way that enhances mathematical understanding, and presentations of exemplary courses or course modules. Submissions are encouraged from teachers in engineering, the physical and social sciences, and management and public policy, showing examples of how mathematics is used in their courses. Submissions are also encouraged from mathematicians who have successfully incorporated such material into their courses.

Wednesday and Thursday mornings
William McCallum (*)
Department of Mathematics
University of Arizona
Tucson, AZ 85721
phone: (520) 621-6886
fax: (520) 621-8322
e-mail: wmc@math.arizona.edu

Duff Campbell, U.S.M.A. at West Point
Deborah Hughes Hallett
University of Arizona
David Lay, University of Maryland
Nicholas Losito, SUNY Farmingdale
Jim Rolf, U.S.M.A. at West Point
Yajun Yang, SUNY Farmingdale

Innovative Uses of the World Wide Web in Teaching Mathematics

This contributed paper session will focus on creative uses of the World Wide Web in mathematics instruction. Proposals are solicited on original uses of Web resources in the classroom. We are looking for presentations involving the use of real data sets, instructional materials, interactive simulations, videoconferencing, or other topics of interest for educators who are currently using, or planning to use, the Web in their classes.

Wednesday and Thursday mornings
Brian E. Smith (*)
Department of Statistics
Faculty of Management
McGill University
1001 Sherbrooke St. West
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phone: (514) 398-4038
fax: (514) 398-3876
e-mail: smithb@management.mcgill.ca

Marcelle Bessman
Jacksonville University

Environmental Mathematics in the Classroom

Presentations are invited that apply mathematics to problems of the environment and that are suitable for classroom use. Also invited are papers that address the issue of infusing environmental awareness into the teaching community. This session is sponsored by the Committee for Mathematics in the Environment.

Wednesday and Thursday mornings
Ben Fusaro (*)
Department of Mathematics
Florida State University
Tallahassee, FL 32306
phone: (850) 644-9717
fax: (850) 644-4053
e-mail: fusaro@math.fsu.edu

Pat Kenschaft,
Montclair State University

Interdisciplinary Applications for College Algebra

The College Algebra Reform Movement has grown exponentially over the past few years. New courses have been developed featuring data analysis, discrete dynamical systems, real life applications, and modeling. Students are expected to use graphing calculators or computers in these courses. Pedagogical changes include small group work, out of class projects, and writing assignments. Interdisciplinary aspects appear in these reform courses through applications and group projects. The reformed courses are changing the role of College Algebra from being a remedial course to being the core course in the non-calculus curriculum. Papers are invited on all aspects of reforming College Algebra.

Wednesday and Thursday afternoons
Don Small (*)
Dept. of Mathematical Sciences
U.S. Military Academy
West Point, NY 10996
phone: (914) 938-2227
fax: (914) 938-2409
e-mail: don-small@usma.edu

Della Bell, Texas Southern University
Ahmad Kamalvand
Houston-Tillotson College

Interdisciplinary Collaborations to Improve Service Courses in Mathematics and Statistics

We invite descriptions of collaborations with faculty and departments in other disciplines resulting in improvements to existing service courses in mathematics or statistics. Papers should describe a challenge faced for a particular service course, a resulting collaboration with faculty or a department in another discipline, subsequent changes in the service course, and the effects of the relationship between faculty and departments.

Wednesday and Thursday afternoons
Linda H. Boyd (*)
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Clarkston, GA 30021-2396
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fax: (404) 298-4815
e-mail: lboyd@gpc.peachnet.edu

Thomas L. Moore, Grinnell College

The Role of Mathematicians in the Development of Mathematics Teachers and Their Students

Mathematicians have many opportunities to support and enhance the development of K-12 mathematics teachers and their students. This session invites papers that describe the substantive involvement of mathematicians throughout K-12 education, but especially in (a) planning and delivering professional development for inservice teachers; (b) developing or analyzing curricular/instructional/assessment materials for use in professional development with teachers or for use in classrooms with students, with particular attention to the mathematics presented; and (c) collaborating with mathematics educators and classroom teachers on "action research" (e.g., research based on reflection about teachers' practice), by providing a focus on and close attention to the mathematics involved.

Thursday afternoon
Diane Spresser (*)
National Science Foundation
4201 Wilson Boulevard, Room 885
Arlington, Virginia 22230
phone: (703) 306-1613
fax: (703) 306-0412
e-mail: dspresse@nsf.gov

John Bradley
National Science Foundation
Alfred Manaster
University of California, San Diego

Looking to Our Future: Recruiting and Preparing the Next Generation of Mathematics Teachers

Mathematicians and Mathematics Departments face the critical challenge of preparing the next generation of teachers of mathematics at the K-12 level. These sessions will illustrate ways this challenge is being met. The first session will address the role that Mathematics Departments at two-year colleges play in the initial recruitment and preparation of future teachers of mathematics. With their emphasis on teaching and ties to common education, departments at two-year colleges provide a unique atmosphere for attracting potential teachers to the subject matter as well as acting as a laboratory for modeling effective teaching techniques. The second session will address the role played by Mathematics Departments at four-year colleges and universities in the mathematical preparation of future teachers of mathematics. Mathematics Departments provide opportunities for a content rich atmosphere across a wide range of mathematics courses, reflective seminars, peer teaching programs and early field experiences particularly valuable for future teachers.

Papers that discuss effective collaborations across mathematics courses, departments and institutions will be given special consideration, as will papers that address issues of preparation of middle grade teachers, programs for elementary mathematics specialists, and recruitment and retention of underrepresented minorities to teaching mathematics. Specific details about programs and courses, with handouts, are strongly encouraged.

Friday and Saturday mornings
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e-mail: malmstrm@qns.com

Gary Britton, University of Wisconsin
Washington County
Marjorie Enneking
Portland State University
James Loats, Metropolitan State
College of Denver
Mary Robinson
University of New Mexico

Establishing and Maintaining Undergraduate Research Programs in Mathematics

In recent years, there has been a growing interest in research in mathematics by undergraduates. We seek papers that address successes and difficulties

in establishing, maintaining, funding, and assessing undergraduate research programs of all kinds, especially academic year programs. Descriptions and analyses of any efforts that support and encourage the involvement of students in mathematics research, including informal programs, mentoring individual students, conferences and meetings involving students, REU programs and non-REU formal programs are welcome.

Friday and Saturday mornings
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e-mail: kenney@siena.edu

Joseph Gallian
University of Minnesota, Duluth
Daniel Schaal
South Dakota State University

Innovations in the Use of Technology in Teaching Ordinary and Partial Differential Equations

This session invites papers on recent innovations in the effective use of technology in teaching ordinary and partial differential equations. A great deal of attention has been focused on using Computer Algebra Systems (CAS's) to teach mathematics at the calculus level. However, many upper level mathematics courses can also be significantly enhanced with technology. In particular, instructors can exploit visualization and algebra capabilities to support their instruction. Additionally, students can take advantage of technology in self explorations, active learning or cooperative learning modules which complement the Calculus Reform Movement. We are looking for novel and proven methods for incorporating technology in the teaching of ordinary and partial differential equations. Effective projects requiring the use of CAS's, especially those of an interdisciplinary nature are welcome.

Friday and Saturday afternoons
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Elias Deeba
University of Houston-Downtown
Rich Marchand, USMA at West Point

Math and Math Sciences in 2010: What Should Graduates Know?

The third millennium confronts us with the need to prepare our students for new challenges. Identifying these challenges will guide mathematics departments in setting, addressing, and meeting goals. A broad look at the undergraduate curriculum is particularly timely after over a decade of innovation and debate about content and pedagogy in specific courses. This session presents a panel of commentators on these issues and invites talks of two kinds: "think pieces" on what our majors should know and examples of successful mathematics programs. Research on the preparation of graduates for the workplace and/or post-BA study and examples of collaboration with employers or those in mathematics-using fields are encouraged. This session is organized on behalf of the MAA Committee on the Undergraduate Program in Mathematics (CUPM).

Friday and Saturday afternoons
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e-mail: hkasube@bradley.bradley.edu

Harriet Pollatsek
Mount Holyoke College

Teaching Statistical Reasoning

Statistical reasoning encompasses more than just calculating p-values and confidence intervals - it includes formulating questions, designing experiments, choosing appropriate techniques, and communicating results. Authors will discuss experiences teaching statistical reasoning in a variety of undergraduate settings, including introductory statistics courses, team taught courses with other departments, a segment of a math for liberal arts courses, or new courses such as "statistics for humanists". There are no restrictions on the techniques used to teach the reasoning, but the emphasis should be on teaching the reasoning.

Friday and Saturday afternoons
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Nkechi M. Agwu
Borough of Manhattan CC
Mary Sullivan, Rhode Island College

Research on the Use of Hand-Held Technology in Teaching Mathematics

For more than a decade, instructors have been teaching mathematics with graphing calculators. In that time, improvements in design and capabilities have expanded the range of calculator use from computation and function graphing to symbol manipulation and geometric constructions; yet, researchers are only beginning to explore the effects of these advanced technologies on teaching and learning. What have we learned about using calculators in mathematics instruction? This session seeks papers about research on the use of hand-held technology in the teaching of mathematics. Reports of studies using either quantitative or qualitative methodologies are welcome, but anecdotal information is not the focus of this session. Preference will be given to recent investigations, research involving undergraduate mathematics instruction, and studies of newer technologies with advanced capabilities.

Saturday afternoon
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Penelope Dunham
Muhlenberg College

Mission

continued from page 2

and training of new teachers.

Research in mathematics and mathematics education has been a part of our publications effort and presentations at sectional and national meetings from the beginning, and we recognize the importance of maintaining a relationship between teaching and research functions at all levels.

The phrase, "especially at the collegiate level," acknowledges our traditional commitment to serving members working in universities, colleges, and two-year institutions.

At the same time, we recognize that our concerns overlap with those involved in pre-college education and graduate-level education, as well as those committed to research.

Finally, in order to reach the broadest audience for our MAA activities, we state our commitment to "all who are interested in the mathematical sciences."

By this we mean to include not only our traditional core group of academic pure and applied mathematicians, but also undergraduate and graduate mathematics students, former mathematics students now working in the private and public sector, teachers in allied disciplines (like statistics and operations research), and all who appreciate the beauty and power of mathematics.

This encompasses a great many people, and we look forward to serving them all.

One thing that has become clear to us is that there are many MAA activities that fit under the proposed mission statement that are only indistinctly perceived by our membership. This, we hope, will change as we pursue our mandate to attract new members.

Reformulating our mission is just a first step. We must work together to move it forward. At the very least, the mission statement exercise has led us to ask good questions. I look forward to hearing from you. I can be reached at Thomas_Banchoff@brown.edu. ■

ARUME Calls for Papers

The Association for Research on Undergraduate Mathematics (ARUME) aims to foster a professional atmosphere for quality research in the teaching and learning of undergraduate mathematics.

Contributed paper sessions for mathematics educators and professional mathematicians interested in research on undergraduate mathematics education, organized by Julie Clark of Davidson College, and Mickey McDonald of Occidental College, will be offered at the national meeting in Washington, D.C., in January 2000.

Research papers that address issues concerning the teaching and learning of undergraduate mathematics are invited.

Theoretical and empirical investigations using qualitative or quantitative methodologies are appropriate. These should be set within established theoretical frameworks and should further existing work. Reports on completed studies are especially welcome.

Send the name(s) and addresses(es) of the author(s) and a one-page outline of proposed talks by September 3 to: Julie Clark, Department of Mathematics, Davidson College, Davidson, NC 28036; fax: (704) 892-2005; e-mail: juclark@davidson.edu.

New NSF Program: Adaptation and Implementation Projects

Are you interested in implementing a course at your institution based on what you learned at a National Science Foundation sponsored workshop?

Consider the new NSF program for Adaptation and Implementation Projects through the Course, Curriculum, and Laboratory Improvement (CCLI) program.

Information can be found at http://www.ehr.nsf.gov/EHR/DUE/programs/ccli/ccli.htm or by contacting one of the mathematics program directors in the Division of Undergraduate Education—Jim Lightbourne at jhlightb@nsf.gov, Elizabeth Teles at eteles@nsf.gov or Frank Wattenberg at fwattenb@nsf.gov. ■

St. Norbert College to Host Undergraduate Mathematics Conference

Make plans now to attend the fourteenth annual regional Undergraduate Mathematics Conference sponsored by St. Norbert College's Mathematics Club, the MAA Student Chapter, and the Pi Mu Epsilon Chapter on November 5–6.

Highlights of the conference will include sessions for student papers and two presentations by Professor Lisa Townsley Kulich of Benedictine University, one on Friday evening and the other on Saturday morning.

Anyone interested in undergraduate mathematics is welcome to attend. All students (who have not yet received a master's degree) are encouraged to present papers.

Housing will be provided for students. Be sure to bring your sleeping bags!

The conference is free and open to the public.

For further information, contact Rick Poss, St. Norbert College, De Pere, WI 54115 (920) 403-3198, fax: (920) 403-4098 e-mail: possrl@mail.snc.edu ■

Additional Mathfest Item: The AMS-MAA Invited Address

On July 31, from 3:05 p.m. to 3:55 p.m. at the Providence Mathfest, Carolyn S. Gordon of Dartmouth College will give a talk entitled "Inaudible Geometry."

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MAA Section Workshops

J in the Math Classroom: Visualization, Number Theory and Linear Algebra

EPADEL Section Summer Workshop June 14-18, 1999: Messiah College Grantham, PA. Contact: Marvin Brubaker; (717) 766-2511, x7283; mbrubake@messiah.edu

Designed for mathematics faculty who wish to explore using the computer language J in the mathematics classroom. Professor **Cliff Reiter** of Lafayette College will give an introduction to the language and offer illustrations from his classroom use of J in teaching mathematical visualization, linear algebra and number theory. Participants are expected to share their own experiences and brainstorm with other participants about what makes a valuable computer based mathematics laboratory experiment.

Teaching Dynamical Systems Across the Curriculum

Allegheny Mountain Section Short Course. June 21-24, 1999: Allegheny College, Meadville, PA. Contact: George Bradley, bradley@duq3.cc.duq.edu or Steve Bowser, sbowser@alleg.edu
Web address: http://webpub.alleg.edu/dept/mathweb/ssc98.html

Professor **Robert Devaney**, Boston University, presents this short course which will focus on methods by which ideas from dynamical systems theory may be included in various parts of the undergraduate curriculum. These topics provide an ideal opportunity to give students (particularly lower division students) a glimpse of modern ideas in mathematics in a setting that is germane to the course at hand.

The Mathematics of the Perfect Shuffle

Ohio Section Short Course. June 23-25, 1999: Miami University, Oxford, OH. Contact: Bob Dieffenbach, (513) 727-3238; diefferm@muohio.edu
Web Address: http://miavx3.mid.muohio.edu/~rdieffenbach/shortcourse.htm

Presented by **S. Brent Morris**, National Security Agency, this minicourse will examine the mathematics of the perfect shuffle, a permutation often used by mathematicians, magicians and computer scientists for seemingly different ends. The perfect shuffle has broad appeal because of its interesting mathematics and surprising applications to magic tricks and computer design. The basic shuffle and several generalizations will be introduced, and the group structure generated by the perfect shuffle will be explored. Participants will be taught several card tricks using different properties of the perfect shuffle.

Calculus and Counting

North Central Section Summer Seminar August 9-13, 1999: University of Minnesota, Duluth, MN, Contact: 1999 Summer Seminar, Department of Mathematics and Statistics, University of Minnesota-Duluth, 10 University Drive, Duluth, MN 55812

Counting aspects of binomial coefficients date back over 2000 years, and Pascal's triangle more than 1000. In spite of their great age, new aspects of binomial coefficients have been discovered in each of the past four centuries. Professor **Richard Askey**, University of Wisconsin traces the historical development of binomial coefficients from their origins to the present day.

MAA Short Course at Providence Mathfest99

Two-Day Short Course: Recent Developments in the Teaching of Differential Equations

July 29-30, 1999
Organized by **Paul Blanchard**, Boston University

Topics include the role of computation in the sophomore-level differential equations course, the introduction of qualitative and geometric techniques, group projects, and the use of animation.

Please see the April, 1999 FOCUS or MAA Online for further information and registration details.

MAA Minicourses at Providence Mathfest99

The Curves and Surfaces of the Digital Age July 31, 1:00–2:50 pm and August 1, 1:00–2:50 pm.

Discrete Dynamical Systems: Mathematics, Methods, and Models August 1, 1:00–2:50 pm and August 2, 1:00–2:50 pm

Construction Projects and the Imagination July 31, 1:00–2:50 pm and August 1, 4:10-6:00 pm.

Generating Functions: Techniques and Tricks August 1, 4:10–6:00 pm and August 2, 1:00–2:50 pm.

Please see the April, 1999 FOCUS or MAA Online for further information and registration details. ■

Employment Opportunities

INDIANA

DEPAUW UNIVERSITY

The Department of Mathematics at DePauw University invites applications for a one-year term appointment, with possibility of renewal, starting in the fall of 1999. Duties include teaching three undergraduate courses (twelve contact hours per week) each semester and winter term. Ph.D. preferred, master's required. DePauw University is a private liberal arts college with 2200 students located forty-five miles west of Indianapolis.

Applicants should send a vita, statement of professional goals and teaching philosophy, and three letters of recommendation to Underwood Dudley, Mathematics Department, DePauw University, Greencastle, IN 46135. E-mail: dudley@depauw.edu; phone: 765-658-4488; fax: 765-658-4732. Review of applications will begin April 15 and continue until the position is filled. More information about DePauw can be found at its website, www.depauw.edu. DePauw University is an equal opportunity, affirmative action employer. Women and minority candidates are encouraged to apply.

VIRGINIA

NATIONAL SCIENCE FOUNDATION
Division of Elementary, Secondary, and Informal Education

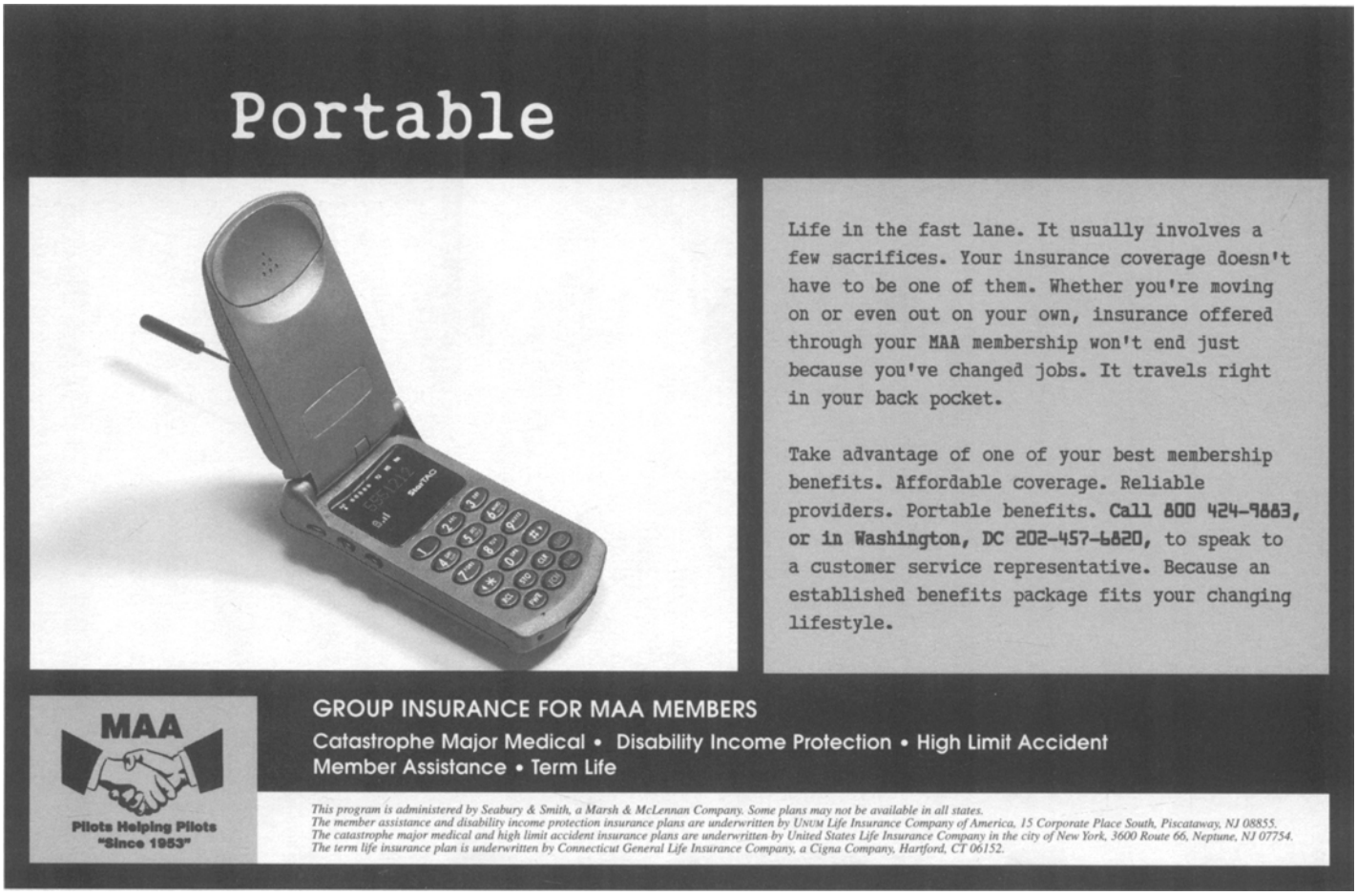
Program Officer, Employment Opportunities, The Division of Elementary, Secondary and Informal Education of the National Science Foundation, seeks qualified applicants to serve on temporary "Intergovernmental Personnel Act (IPA)" appointments as Program Directors while on leave from universities, colleges, or other educational or nonprofit agencies. Since the timing of these positions is staggered, the Division continually seeks talented applicants. In 1999 the Division expects to make appointments in the following areas:

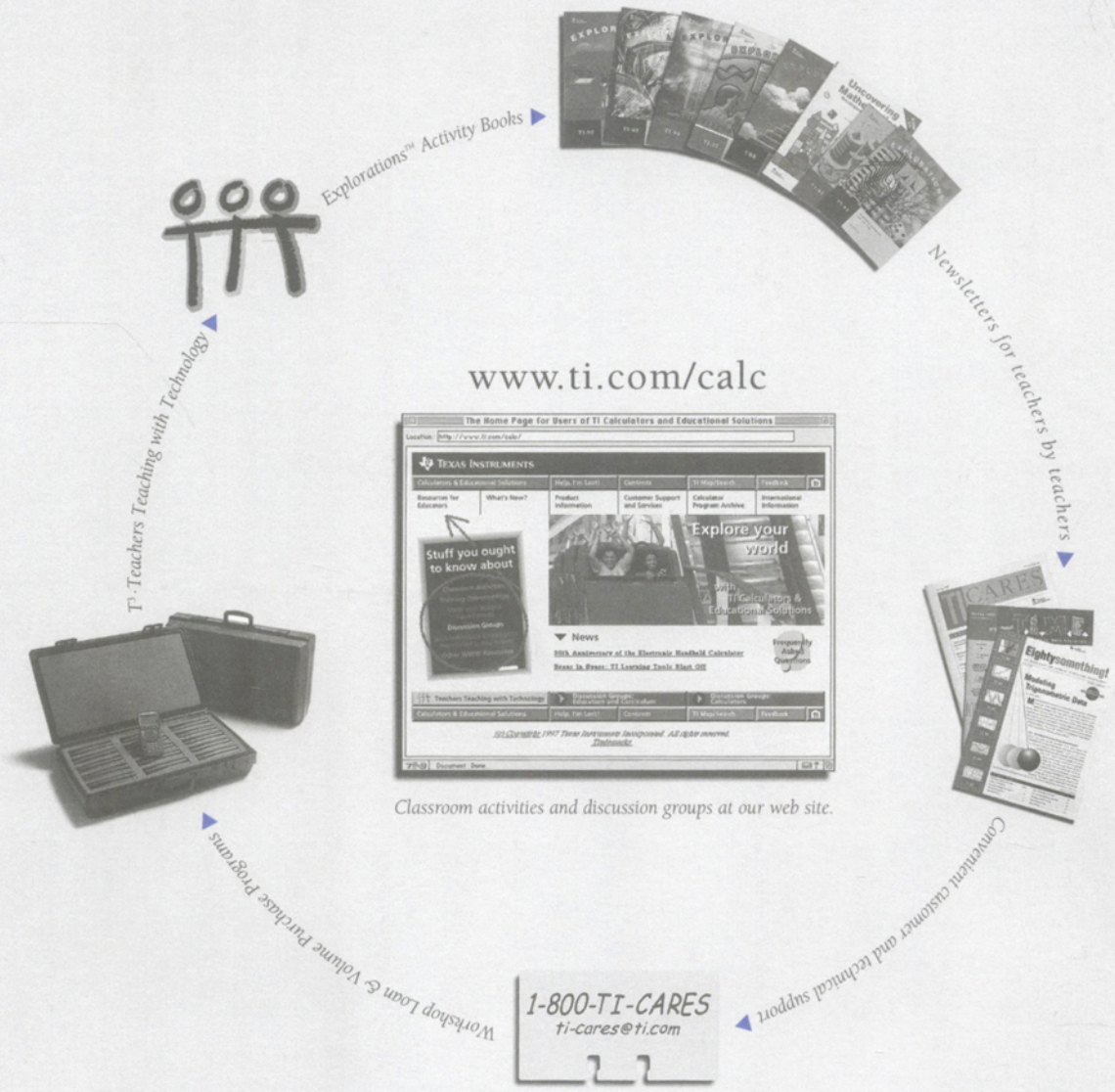
- Teacher Enhancement—Mathematics, Elementary and Secondary
- Instructional Materials Development—Elementary Mathematics
- Technology Education
- Informal Science Education—Community-and Youth-based Projects

Responsibilities include proposal evaluation and budget development, project oversight, and scientific program planning within the context of elementary, secondary and informal education. Positions will be filled on a one-year rotational basis (with the possibility of one to two year extensions) beginning no later than late summer/early fall 1999. Qualification requirements at the Program Director level include a Ph.D. or equivalent in a relevant science or science education discipline, plus six or more years of successful, related experience beyond the Ph.D. Applicants with a master's degree in a relevant field or with less experience may be considered for assignment at the Associate of Assistant Program Director level.

Qualified individuals who are women, ethnic/racial minorities, and/or persons with disabilities are strongly urged to apply. No person shall be discriminated against on the basis of race, color, religion, sex, national origin, age, or disability in hiring by the National Science Foundation. NSF is an Equal Opportunity Employer committed to employing highly qualified staff that reflect the diversity of our nation. Applicants should send a letter of interest and vita to:

Division Director
Division of Elementary, Secondary and Informal Education
National Science Foundation
4201 Wilson Boulevard
Room 885
Arlington, Virginia 22230





Classroom activities and discussion groups at our web site.

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