N

$:$ | $\because$ |
| :--- |
|  |
| -8 |
| - |

The Newsletter of the Mathematical Association of America


Registration
DEADLINES
Early ...................... November 1
Ordinary.................. November 14
Final ................. December 15

FOCUS is published by the Mathematical Association of America in January, February, March, April, May/June, August/September, October, November, and December.
Editor: Fernando Gouvea, Colby College; figowea@colby.edu
Managing Editor: Carol Baxter, MAA cbaxter@mas.org
Senior Wrter: Harry Waldman, MAA hwaldman@maa.org
Please address advertising inquiries to:
Carol Baxter, MAA; chaxter@maa.org
President: Thomas F. Banchoff, Brown University
First Vice-President: Barbara L. Osofsky
Second Vice-President: Frank Morgan
Secretary: Martha J. Siegel
Associate Secretary: James J. Tattersall,
Treasurer: Gerald J. Porter Executtive Director: Tina H. Straley
Assoclate Executive Director and
Director of Publications and Electronic Services: Donald J. Albers
Assoctate Executive Director and Director of Programs and Services: Thomas W. Rishel

## FOCUS Edtorial Board:

Gerald Alexanderson; Donna Beers;
J. Kevin Colligan; Ed Dubinsky; Bill Hawkins;

Dan Kaiman; Maeve McCarthy; Peter Renz; Annie Selden; Jon Scott; Ravi Vakil.
Letters to the editor should be addressed to: Femando Gouvéa, Colby College, Dept. of Mathematics, Waterville, ME 04901.
Subscription and membership questions should be directed to: MAA Customer Service
Center, 800-331-1622; e-mail: maahq@maa.org, (301) 617-7800 (outside U.S. and Canada); fax: (301) 206-9789.

Copyright © 2000 by the Mathematical
Association of America (Incorporated).
Educational institutions may reproduce articles for their own use, but not for sale, provided that the following citation is used:
"Reprinted with permission of FOCUS, the
newsletter of the Mathematical Association of America (Incorporated)."
Periodicals postage paid at Washington, DC and additional mailing offices.
Postmaster: Send address changes to FOCUS, Mathematical Association of America, P.O. Box 90973, Washington, DC 20090-0973
ISSN: 0731-2040; Printed in the United States of America

## 2001

JOINT
MATHEMATICS
MEETINGS
NEW ORLEANS
MARRIOTT AND
SHERATON HOTELS
NEW ORLEANS,
LOUISIANA
JANUARY 10-13, 2001
Joint MAA-AMS Invited Addresses/Joint Sessions ..... 2
MAA Invited Addresses. ..... 3
MAA Minicourses ..... 3-4
MAA Contributed Paper Sessions ..... 5
Other MAA Sessions ..... 6-11
MAA Student Activities ..... 11
MAA Short Course/Other MAA Events ..... 12
AMS Invited Addresses/AMS Special Sessions. ..... 13-15
Activities of Other Organizations ..... 15
Registration Information. ..... 18-21
Registration Form ..... 23-24
Schedule of Events. ..... 25-30
Mathematical Sciences Employment Center. ..... 31-33
Map ..... 34
Employment Opportunities ..... 35-37
Notes ..... 38-40

## rices 1



## 2001 <br> Joint Mathematics Meeting

## Welcome to New Orleans!

Welcome to the Joint Mathematics Meetings, in New Orleans, January 10-13. Join our colleagues to learn from the past, and discover the future of mathematics at the largest professional mathematics gathering of the year.

At this meeting, you will be in the difficult position of choosing from a variety of distinguished speakers and topics. Special Sessions, Invited Addresses, Contributed Paper Sessions, and Mincourses will vie for your attention. Take time to visit the Exhibit Hall, which will feature leading companies, associations, and organizations in the mathematics community. In between these events, you will have plenty of opportunity to meet and greet your colleagues at various social events.

Register early for discounted rates. Use the enclosed registration form, or register online at www.ams.org. We look forward to seeing you in the New Orleans!

# Joint MAA-AMS Invited Addresses 

Barry Mazur, Harvard University
Deformations, perturbations and near-misses in geometry, physics, and number theory
Friday, 11:10 AM
Jeffrey R. Weeks, Canton, N.Y.
Measuring the universe
Wednesday, 11:10 AM

# Joint SpecialSessions 

History of Mathematics (MAA-AMS)

Karen H. Parshall, University of Virginia, and David E. Zitarelli, Temple University
Friday and Saturday mornings and afternoons

## Mathematics and Education Reform (MAA-AMS-MER)

Naomi Fisher, University of Illinois at Chicago, William H. Barker, Bowdoin College, Jerry L. Bona, University of Texas at Austin, and Kenneth C. Millett, University of California, Santa Barbara
Wednesday and Thursday mornings and afternoons

## Other JointSessions

The NSF National Science, Mathematics, Engineering, and Technology Education Digital Library Program: A Report on Current Activities and Projects
Thursday, 2:45 PM-4:15 PM
organized by Lee L. Zia and James H. Lightboume, NSF Division of Undergraduate Education.

In this panel discussion presenters will describe the current portfolio of projects being supported by the Program. Representatives of selected projects will report on their progress to date and general issues for course and curriculum content developers will be addressed. Funding opportunities will also be discussed.

Panelists include Lang Moore. Duke University; Gene Klotz, Swarthmore College and mathforum.com; and Robby Robson, Oregon State University. Sponsored by the MAA and AMS.

## Prize Session and Reception

In order to showcase the achievements of the recipients of various prizes, the AMS and MAA are cosponsoring this event at 4:25 PM on Thursday. A cash bar reception will immediately follow. All participants are invited to attend. The MAA prizes include the Deborah and Franklin Tepper Haimo Award for Distinguished College or University Teaching of Mathematics, the Chauvenet Prize, the Yueh-Gin Gung and Dr. Charles Y. Hu Award for Distinguished Service to Mathematics, and Certificates of

Meritorious Service. The AMS will announce the winners of the Levi L. Conant Prize, the Ruth Lyle Satter Prize in Mathematics, the Leroy P. Steele Prizes, the Oswald Veblen Prize in Geometry, and the Albert Leon Whiteman Memorial Prize. The AWM will present the Louise Hay Award for Contributions to Mathematics Education, and the Alice T. Schafer Prize for Excellence in Mathematics by an Undergraduate Woman. This session also will be the venue for the announcement of the Joint Policy Board for Mathematics Communication Award and the Leonard M. and Eleanor B. Blumenthal Award for the Advancement of Research in Pure Mathematics.

## Teaching Math and the World Wide Web

 Friday, 9:00 AM-10:30 AMorganized by Andrew G. Bennett, Kansas State University, and Judith Baxter, University of Illinois, Chicago.

There has been an explosion of interest in using the World Wide Web to support or enhance the teaching of mathematics among both mathematicians and administrators. Different faculty are using the web to provide textural information, live animations, automated online homework systems, real world problems, interactive chat rooms, and many other resources. Many interesting projects are going on, but most are developing independently. There is no central site or journal where mathematicians can go to find out what other people are trying, what works, what doesn't, and how to effectively integrate new web-based technologies into instruction. This session would provide a forum for faculty to share their experiences and to learn from each other.

Panelists include Judith Lee Baxter (moderator), University of Illinois at Chicago; Andrew G. Bennett, Kansas State University; Thomas F. Banchoff, Brown University; Susan Holmes, Stanford University; and Gene Klotz, Swarthmore College. Sponsored by the MAA and AMS.

## Philosophy of Mathematics: <br> That Which is of Interest to Mathematicians

Saturday, 1:00 PM-2:30 PM
organized by Joseph Auslander, University of Maryland, and Bonnie Gold, Monmouth University.
The 20th century diversion of philosophy of mathematics into questions of foundations and the nature of numbers resulted in many mathematicians losing interest in the subject. However, there are many philosophical questions which the mathematical community appears to care about, such as the relationship between mathematics and the (physical) world, the role of aesthetic considerations in the development of new mathematics, the value of experimental mathematics, and how central proof is for mathematics. Evidence of this interest is the regular review in AMS and MAA publications of books on the philosophy of mathematics. This panel attempts to begin a dialogue between mathematicians interested in philosophical questions and philosophers of mathematics.

Panelists include Chandler Davis, University of Toronto; Reuben Hersh, University of New Mexico;
Saunders Mac Lane, University of Chicago; and Kenneth Manders, University of Pittsburgh.
Sponsored by the MAA and AMS.

## 84th Annual Meeting of the MAA

## MAA Invited Addresses

Robert F. Almgren, University of Toronto Financial derivatives and PDEs, Friday, 2:15 PM

Hyman Bass and Deborah Ball, University of Michigan, Ann Arbor
Title to be announced
Wednesday, 3:20 PM
Ralph Keeney, University of Southern California Building and using mathematical models to guide decision making Friday 7:30 PM-8:20 PM (Student Lecturer)
Peter D. Lax, Courant Institute, New York University Title to be announced
Thursday, 10:05 AM
Ivars Peterson, Science News
A kaleidoscope of mathematics and art Saturday, 10:05 AM

Eleanor Robson, University of Oxford Neither Sherlock Holmes nor Babylon:
A reassessment of Plimpton 322
Wednesday, 2:15 PM
Peter Winkler, AT\&T Bell Laboratories
Collision and percolation
Saturday, 9:00 AM

## MAA Minicourses

## MINICOURSE \#1:

Creating materials using 'real-world' data
Part A: Wednesday, 8:00 AM-10:00 AM
Part B: Friday, 8:00 AM-10:00 AM
organized by Janet L Andersen, Todd M. Swanson, and Elliot A. Tanis, Hope College.
We will discuss the advantages and disadvantages of using materials based on 'real data', give examples, talk about the process of developing such materials, and give participants an opportunity to create their own materials. Participants will be provided with resource materials, access to electronic databases, and samples of materials we have created. The focus will be on creating problem sets for lower-level courses (general education courses, precalculus, calculus, multivariable calculus, and statistics). Enrollment limit is 30 ; cost is $\$ 85$.

## MINICOURSE \#2:

WeBWorK, an Internet-based system for generating and delivering homework problems to students
Part A: Wednesday, 2:15 PM-4:15 PM
Part B: Friday, 1:00 PM-3:00 PM
organized by Amold K. Pizer, Michael E. Gage and Vicki Roth, University of Rochester

This minicourse introduces participants to WeBWork, a
freely available system that comes with an extensive library of problems. WeBWork won the 1999 ICTCM Award for Excellence and Innovation with the Use of Technology in Collegiate Mathematics. Supported by a grant from NSF, WeBWork has already been adopted by a number of universities. Participants will actively participate in using WeBWork and writing WeBWork problems. Readers can learn more about WeBWorK by connecting to http://www.math.rochester.edu/webwork. Enrollment limit is 30 ; cost is $\$ 85$.

## MINICOURSE \#3:

Teaching contemporary statistics with active learning
Part A: Thursday, 10:15 AM-12:15 PM
Part B: Saturday, 3:15 PM-5:15 PM
organized by Allan J. Rossman, Dickinson College; Beth L. Chance, California Polytechnic State University, San Luis Obispo; Robin H. Lock, St. Lawrence University; and Mary R. Parker, Austin Community College.

In keeping with the recommendations of the ASA/MAA Committee on Undergraduate Statistics, this minicourse will help instructors to teach statistical thinking with more data and concepts, less theory and fewer recipes. Participants will engage in hands-on investigations that can be adopted for immediate use with students. These activities concern such topics as data collection, exploratory data analysis, randomness, and statistical inference. Other issues considered include student projects, authentic assessment, and resources for teaching statistics. Enrollment limit is 30 ; cost is $\$ 85$.

## MINICOURSE \#4:

The Global Classroom: Using the Web as an interactive learning environment.
Part A: Thursday, 8:00 AM-10:00 AM
Part B: Saturday, 8:00 AM-10:00 AM
organized by Marcelle Bessman, Jacksonville University and Douglas A. Quinney, Keele University, UK.

The Global Classroom is a seamless learning environment that supports live audio-visual interaction and collaboration on commonly used mathematical or other software between students in a class in one location and visitor(s) and/or students at another. It is a medium for distance learning, virtual office hours, participation in remote seminars and colloquia, and collaborative research. Minicourse participants will have the opportunity to experience the Global Classroom as both visiting instructor and recipient student. Enrollment limit is 30 ; cost is $\$ 85$.

## MINICOURSE \#5:

Creating and exporting computer animations to the Web
Part A: Thursday, 1:00 PM-3:00 PM
Part B: Saturday, 1:00 PM-3:00 PM
organized by William D. Emerson, Louis A. Talman, and Bradford Kline, Metropolitan State College of Denver.

Minicourse participants will use Mathematica to develop animations that illustrate concepts from the undergraduate curriculum and will learn to export these animations to the Web via QuickTime. A modest familiarity with Mathematica or other computer algebra systems is assumed. We will conduct this minicourse in a computer laboratory, but participants are welcome to supply their own laptops equipped with Mathematica ( $\geq 3.0$ ). Enrollment limit is 30 ; cost is $\$ 85$.

Minicourses are open only to persons who register for the Joint Meetings and pay the Joint Meetings registration fee in addition to the appropriate minicourse fee.

If the only reason for registering for the Joint Meetings is to gain admission to a minicourse, please make a notation on your registration form.
If the minicourse is fully subscribed or cancelled, a full refund will be made of the Joint Meetings advance registration fee (otherwise subject to the $50 \%$ rule).
The MAA reserves the right to cancel any minicourse that is undersubscribed.

## MINICOURSE \#G:

Computation and discovery in the number theory classroom
Part A:
Wednesday, 4:30 PM-6:30 PM
Part B:
Friday, 3:15 PM-5:15 PM organized by Clifford A. Reiter, Lafayette College

While proofs remain central to number theory, technology offers opportunities for discovering theorems and investigating conjectures in the number theory classroom. The instructor has developed several J-based computer classroom laboratories which will be shared with participants. No experience with $J$ is expected. Sample lab topics include the sieve of Eratothenese and twin primes, discovering quadratic reciprocity and public key codes. Participants are expected to share their ideas, reactions and experiences. Enrollment limit is 30 ; cost is $\$ 85$.

## MINICOURSE \#7:

## Cwatsets:

A research experience for undergraduates
Part A:
Wednesday, 8:00 AM-10:00 AM
Part B:
Thursday, 8:00 AM-10:00 AM
organized by Gary J. Sherman,
Rose-Hulman Institute
of Technology
Cwatsets are group-like subsets of binary $n$-space with surprising algebraic and combinatorial properties whose applications range from statistics to graph theory. We will survey the undergraduate-driven theory of cwatsets, discuss cwatsets as a capstone topic for a discrete mathematics or abstract algebra course, and present an extensive inventory of research questions suitable for undergraduates and their teachers. Participants will receive a packet of technical reports, papers, examples, and questions. See http://uww.cwatsets.org for more details. Enrollment limit is 50 : cost is $\$ 55$.

## MINICOURSE \#8:

## Teaching graduate students how to teach using case studies

Part A: Wednesday, 2:15 PM-4:15 PM
Part B: Friday 1:00 PM-3:00 PM
organized by Solomon Friedberg, Boston College, and Deborah Hughes Hallett and William G. McCallum, University of Arizona.

Many graduate programs are considering the problem of how to best prepare their graduate students for the work force, not solely in research or applications of mathematics but also in teaching mathematics. The case study method gets teaching assistants to think about their teaching by presenting realistic scenarios that engender lively discussion of important classroom issues. The case studies used in this minicourse were developed by the Boston College Mathematics Case Studies Project. Enrollment is limit 50 : cost is $\$ 55$.

## MINICOURSE \#9:

Making liberal arts mathematics the most important course students take to learn effective thinking
Part A: Thursday, 8:00 AM-10:00 AM
Part B: Saturday, 8:00 AM-10:00 AM
organized by Edward B. Burger, Williams College, and Michael Starbird, University of Texas at Austin
Mathematics contains great ideas and employs powerful methods of analysis that transcend mathematics. Topics such as infinity, the fourth dimension, probability, and chaos spark everyone's imagination. These ideas are comparable to masterpieces of art, literature, or philosophy. Our challenge is to convey the genuine ideas of classical and new mathematics and the important strategies of analysis. This minicourse allows participants to discover and experience hands-on methods for bringing deep mathematical results and techniques to life. Enrollment limit is 60 ; cost is $\$ 55$.

## MINICOURSE \#10

Developing your department's
assessment plan
Part A: Friday, 8:00 AM-10:00 AM
Part B: Saturday, 8:00 AM-10:00 AM
organized by William G. Marion, Valparaiso University, and Bonnie Gold, Monmouth University
Most universities, and thus individual departments, are under pressure from accrediting agencies to develop and implement assessment plans to assess student learning. During this minicourse, pairs (or larger groups) of members of a mathematical sciences department will develop, in workshop format, a proposed departmental mission statement and the skeleton of its individualized assessment plan. Sample assessment programs will be discussed and participants will share ideas with groups from similar departments to develop their own program. Enrollment limit is 45: cost is $\$ 55$.

## MINICOURSE \#11:

The mathematics of decision making
Part A: Thursday, 1:00 PM-3:00 PM
Part B: Saturday, 1:00 PM-3:00 PM
organized by Deborah Hughes Hallett,
William G. McCallum, and Richard B. Thompson,
University of Arizona.

This course will address the question of what mathematical skills are needed by beginning undergraduates in business and management programs, and show how those needs can be met through the case study method. We will present four case studies, covering material from probability and calculus through decisions on loan foreclosure, pricing stock options, bidding on oil leases, and pricing disk drives. Each presentation will include business background, mathematical and computer tools needed, and pedagogical issues. Enrollment limit is 50 : cost is $\$ 55$.

## MINICOURSE \#12

Contemporary college algebra:
A reform program
Part A: Wednesday, 8:00 AM-10:00 AM
Part B: Friday, 8:00 AM-10:00 AM
organized by Donald B. Small, U.S. Military Academy; and Dorothy Hunter, Huston-Tillotson College.

This minicourse will take participants on a typical journey through a college algebra reform program. The trip will include small group project presentations, graphing calculator required assignments, writing assignments and assessment techniques. Participants will receive a collection of existing small group projects and will create at least one new small group project during the minicourse. Some familiarity with a graphing calculator will be helpful but not a prerequisite. Enrollment limit is 50 : cost is $\$ 55$.

## MINICOURSE $\# 13$

Getting students involved in undergraduate research
Part A: Wednesday, 2:15 PM-4:15 PM
Part B: Friday, 1:00 PM-3:00 PM
organized by Aparna W. Higgins, University of Dayton;
Joseph A. Gallian, University of Minnesota, Duluth; and Stephen G. Hartke, Rutgers University
This course will cover many aspects of facilitating research by undergraduates, such as finding appropriate problems, deciding how much help to provide, and presenting and publishing the results. Examples will be presented of research in summer programs and research that can be conducted during the academic year. Although the examples used will be primarily in the area of discrete mathematics, the strategies discussed can be applied to any area of mathematics. Enrollment limit is 40 : cost is $\$ 55$.

## MINICOURSE \#14

Discrete dynamical systems, mathematics, methods, and models
Part A: Thursday, 1:00 PM-3:00 PM
Part B: Saturday, 1:00 PM-3:00 PM
organized by Frank R. Giordano COMAP;
David C. Amey, U.S. Military Academy; John S. Robertson, Georgia College \& State University; and Maurice D. Weir, Naval Postgraduate School

The workshop treats linear and nonlinear difference equations, matrix algebra, and systems of difference equations and their mathematical models at the introductory freshman level. Ideas for organizing courses at the freshman and scholastic levels will be discussed, as well as a transition to a calculus course. Ideas for incorporating projects and technology will be presented. Modeling applications include a wide range of disciplines. Handouts of transparencies and projects will be provided. Enrollment limit is 50 : cost is $\$ 55$.

## MAA Contributed Paper Sessions

Great Theorems of Mathematics
Cheryl L. Olsen and Douglas E. Ensley, Shippensburg University
Wednesday and Thursday mornings.
Chaotic Dynamics and Fractal Geometry
Denny Gulick. University of Maryland, College Park, and
Jon W. Scott, Montgomery College
Wednesday and Thursday mornings.
Innovative Uses of the World Wide Web in Teaching Mathematics
Marcelle Bessman, Jacksonville University, and
Brian E Smith, McGill University
Wednesday and Thursday afternoons.
Redefining What a Modern "College
Algebra" Experience Means
Sheldon P. Gordon, SUNY at Farmingdale;
Florence S. Gordon, New York Institute of Technology:
Arlene H. Kleinstein, SUNY at Farmingdale; Mary Robinson, University of New Mexico, Valencia Campus; Linda H. Boyd, Georgia Perimeter College; and Barbara A. Jur, Macomb Community College
Wednesday and Thursday mornings.
Innovative Practices in Statistics Education
Mary M. Sullivan, Rhode Island College;
Carolyn K. Cuff, Westminster College; and
Mary T. Parker, Austin Community College
Friday and Saturday mornings.
Courses and Programs that Illustrate Recommendations of the Mathematical Education of Teachers Document
Judith L. Covington, Louisiana Southern UniversityShreveport
Wednesday and Thursday mornings
Integrating Mathematics and Other Disciplines
William G. McCallum, University of Arizona; Deborah Hughes Hallett, University of Arizona; and Yajung Yang, SUNY, Farmingdale
Friday and Saturday mornings
Serving the Needs of Developmental Students: Who Are They, Where Do They
Come From, Where Do They Go?
Suzanne Dorée, Augsburg College, and
Bonnie Gold, Monmouth University
Wednesday and Thursday afternoons.
The Undergraduate Seminar in Mathematics
Barry J. Amow and George A. Avirappattu, Kean University of New Jersey
Wednesday afternoon.

Computer Algebra Systems in Upper-Division Mathematics Courses
Kent M. Neuerburg, Southeastern Louisiana University, and Andrew Stuart Lang, Oral Roberts University
Friday morning
Implementation of National Projects on Local Campuses
Stuart Boersma, Alfred University, and Constant J. Goutziers, SUNY at Oneonta
Saturday morning.
Classroom Demonstrations and Course Projects that Make a Difference
David R. Hill, Temple University; Sarah L. Mabrouk, Boston University; and Lila F. Roberts, Georgia Southern University
Friday morning.

## Putting the "Service" Back

 into Service CoursesThomas L. Moore, Grinnell College, and
Ahmed I. Zayed, University of Central Florida
Saturday morning
College Mathematics in Depth with Dynamic Mathematics Software
E. Paul Goldenberg, Education Development Center, Newton, MA; Jean-Marie Laborde, Laboratoire Leibnitz, Grenoble, France; and Barbara Pence, San Jose State University
Saturday morning
Topics in Teaching, Learning, and Exploring Proof
Connie M. Campbell, Millsaps College; Draga D. Vidakovic, Georgia State College; and G. Joseph Wimbish, Huntingdon College Wednesday afternoon.

Mathematics in the Age of Euler
V. Frederick Rickey, United States Military Academy, and William W. Dunham, Muhlenberg College
Thursday afternoon
Outreach Programs for Women and Girls
Kathleen A. Sullivan, Seattle University, and
Elizabeth G. Yanik, Emporia State University
Friday morning

## ARUME Session

Julie M. Clark, Emory \& Henry College
Wednesday and Thursday mornings.
General Contributed Paper Session
Howard L. Penn, United States Naval Academy
Wednesday and Thursday afternoons

See the complete descriptions and instructions on how to participate in these sessions beginning on page 16 in the May/June issue of FOCUS or at http:// www.ams.org/amsmtgs/ 2025_maacall.html.

## Other MAA Sessions

The Muse of History: Writing Biographies of Mathematicians Wednesday, 9:00 AM-10:30 AM organized by Ronald Calinger, the Catholic University of America

Can we get at history as it actually happened, and how closely can a biographer hope to capture the essence of a mathematical scientist? Is there objective biography, and can historians be independent of preconceptions? What is the character of mathematics that sets it apart from other kinds of historical and biographical writing? is there an optimal way to avoid confusing past and present categories? In examining the richness and limitations of primary sources and secondary works, what are the most fruifful analytical techniques? How much technical detail and information about personal life should appear in a clear, successful biography? Through referring to studies of Euler, de Morgan, Cantor, Robinson, and others, this session will explore the rapid changes occurring in preparing biographies of mathematicians.

The panel will include Joseph Dauben, City University of New York; Joan Richards, Brown University; and Ronald Calinger, Manfred Kronfellner, Technical University, Vienna will be a commentator.

## On Line Assessment

Wednesday, 9:00 AM-10:30 AM
organized by Earl D. Fife, Calvin College, and Lawrence S. Husch, University of Tennessee, Knoxville

Many mathematics courses at colleges and universities have a World Wide Web component. In addition, many faculty are encouraged and enticed to develop completely on line courses. The problems with assessment in web-based mathematics courses involve those encountered in all disciplines as well as difficulties unique to mathematics. These include the rendering of mathematical notation, how students enter mathematical notation, the determination of whether an answer is correct, etc. The panelists invited for this session will discuss some of these problems, their solutions and the results. There will be ample time for questions and interchange with the panelists.
The panelists include John Orr, University of Oklahoma; Gerardo A. Mendoza, Temple University; and Robby Robson, Oregon State University. The session is sponsored by the MAA Committee on Computers in Mathematics Education (CCIME).

## CBMS Report on the Mathematics Education of Teachers

Wednesday, 9:00 AM-10:30 AM
organized by Ronald C. Rosier, Conference Board of the Mathematical Sciences (CBMS)

CBMS recently published a report on the Mathematical Education of Teachers which encourages mathematical sciences departments in U.S. colleges and universities to make teacher education a more central part of their mission. The report calls for a rethinking of the mathematical education of teachers and offers principles to assist departments in this process, along with specific suggestions about teaching courses in the foundations of
school mathematics. Panelists will discuss the recommendations of the report and possible next steps.
Panelists include W. James Lewis, University of Nebraska; Alan C. Tucker, SUNY at Stony Brook; Roger E. Howe, Yale University; and Carole B. Lacampagne, U.S. Department of Education.

## Redefining "College Algebra" Courses

Wednesday, 2:15 PM-3:45 PM organized by Sheldon P. Gordon, SUNY at Farmingdale
The MAA recently launched a major initiative to redefine what is meant by courses in college algebra. In this session, the panelists will discuss various aspects of this initiative, including the background and reasons for the initiative, the status of those courses that are identified as college algebra, the different populations of students who take these courses and for what reasons, some new visions for college algebra courses, and some of the problems as well as their solutions when a department moves to implement alternatives to traditional college algebra courses.
Panelists include Thomas A. Berger, Colby College; Donald B. Small, U.S. Military Academy; Arlene Kleinstein, Farmingdale; Alexander H. Fluellen, Clark Atlanta University; and Bruce C. Crauder, Oklahoma State University. The session is jointly sponsored by the MAA Task Force on College Algebra (Committee on the Undergraduate Program in Mathematics), CRAFTY (Calculus Reform At the First Two Years), Committee on Two Year Colleges, Committee on Service Courses, and the Committee on Quantitative Literacy.

## Increasing Minority Representation in

 Mathematics Through GAANNWednesday, 2:15 PM-3:45 PM
organized by Lawrence S. Husch, University of Tennessee; Robert Rogers, Virginia Polytechnic Institute and State University, and Krishan M. Agrawal, Virginia State University

Various departments in the country are receiving financial support to increase under-represented groups in mathematics through the Graduate Assistance in Areas of National Need (GAANN) Program funded by the USDOE. The panel members will describe their programs and will also discuss ways they are trying to increase minority representation in the field of mathematics. Audience participation will be solicited.
Panelists include Robert F. Olin, University of Alabama; Robert C. Rogers, Virginia Polytechnic Institute and State University; Ping Zhang, Western Michigan University; Timothy L. Lance, SUNY at Albany; Krishan M. Agrawal, Virginia State University; Alan C. Tucker, SUNY at Stony Brook; Alexandra Kurepa, North Carolina A\&T State University; and David C. Manderscheid, University of lowa, lowa City. The panel is sponsored jointly by the Committee on Minority Participation in Mathematics. There will be a poster presentation by various students exhibiting work in their respective programs, Wednesday, 5:15 PM-7:15 PM.

## YMN Project Panel on

Keeping Active in Research
Wednesday, 4:00 PM-5:30 PM
organized by J. Lyn Miller, Western Kentucky University, and Sharon M. Frechette, Wellesley College.
Many young mathematicians, both in academia and industry, struggle to make a place for continued research activity in their lives during the first few years out of graduate school. Those lucky enough to have a position at a large, heavily research-oriented university or company have a lot of support in this endeavor from their immediate colleagues. However, if their career path leads to a school or company with different priorities, it can be much harder to stay active and interested in research and scholarly activity.

Panelists will share their advice and experiences in balancing research requirements and desires with the professional (and personal) issues that confront us at the beginning of our careers. They will represent a broad cross section of the profession, including young faculty at private and public institutions (of various sizes), and mathematicians in geographically isolated locations, and those in companies with greater emphasis on involvement in management and other nonresearch-oriented activities.

## The British Open University: 30 Years On

 Wednesday, 4:00 PM-6:00 PM organized by Robin J. Wilson and John Fauvel, British Open UniversityThe Open University presented its first distance-learning courses in 1971, with a student population of 16,000 and a single mathematics course. It now has a student population of 160,000 ( 25,000 outside the UK) and a wide range of mathematics and computing courses from precalculus up to MSc courses. In this talk we summarize the expansion of mathematics at the Open University over the past 30 years, illustrate some of the multi-media teaching methods (BBC television programs, audiovision, software, etc.) that we use in our mathematics courses, and describe future plans in the internet.

## The Job Market

Wednesday, 4:00 PM-6:00 PM organized by Thomas W. Rishel, MAA
We will discuss all aspects of the job market, including how to write resumes and cover letters, what goes on at the employment center, and how it feels to actually have an academic position. We will also consider jobs outside academia, and we will finish with a chair's view of the hiring process.
Panelists include Debra L. Boutin, Hamilton College; Richard J. Cleary, Cornell University;
Dennis M. Luciano, Western New England College; Carla Martin, Cornell University, and Thomas W. Rishel. The panel is sponsored by the Joint Committee on Employment Opportunities.

[^0]from the US Department of Education to increase minority representation in the area. This poster session will share the results of some of the participants in these programs.

## Eine Kleine (Mathematische) Nachtmusik

Wednesday, 6:30 PM-8:00 PM
organized by Erich Neuwirth, University of Vienna
The mathematical principles of musical tuning systems will be demonstrated, beginning with simple frequency ratios for musical interval known to the Greeks.
Pythagorean, Mean Tone, and Well Tempered scales will be constructed with accompanying melodies and chords on the piano. A few different pieces will be performed by well known composers to show the connection between the mathematical and physical aspects of the problem. This will also demonstrate how much the musical expression of a piece of music changes when played in different tunings.

## Faculty Isolated by Discipline

Thursday, 9:00 AM- 10:30 AM
organized by John D. Fulton, Virginia Polytechnic Institute and State University

A faculty member is isolated by discipline if $\mathrm{s} / \mathrm{he}$ is the only faculty member with expertise in that discipline within a department. More than one faculty member could be isolated by discipline if they are nontenured and are the only faculty members with expertise in that discipline within a department. The panelists will focus on differences in what faculty members do when they have expertise in different mathematical sciences disciplines, on the special issues and experiences of faculty isolated by discipline, and on what they have done and what should be done to improve the working conditions of such faculty.
The panelists include Donald L. Bentley, Pomona College; John B. Fink, Kalamazoo College;
Annie Selden, Tennessee Technological University; Henry M. Walker, Grinnell College; and
Bernard L. Madison, University of Arkansas, who will act as moderator. The panel is sponsored by the MAA Committee on the Profession, the Association for Research in Undergraduate Mathematics Education SIGMAA, and the ASA-MAA Committee on Statistics.

## How To Attract More Students Into Advanced Mathematics Classes <br> Thursday, 9:00 AM-10:30 AM

organized by T. Christine Stevens, St. Louis University; Joseph A. Gallian, University of Minnesota, Duluth; and Apama W. Higgins, University of Dayton
Despite extraordinary job opportunities and starting salaries for college graduates with advanced mathematical training, the number of students taking advanced mathematics courses has dramatically declined over the past ten years. The members of this panel are from departments that have been able to sustain large enrollments in advanced mathematics courses as well as a flourishing major in mathematics. They will describe what their faculty and their departments do to achieve this success.
Panelists include Mary D. Shepherd, SUNY-College at Potsdam; Paul Zom, St. Olaf College; and
Kirby A. Baker, University of California at Los Angeles. The session is sponsored by MAA's Project NExT.

## Doctoral Programs in Mathematics Education

Thursday, 9:00 AM-10:30 AM organized by Robert E Reys, University of Missouri, Columbia
This session reports results from a recent national conference on doctoral programs in mathematics education and builds on that discussion. The nature and evolution of doctoral programs in mathematics education will be highlighted. Results from a survey of doctoral programs and information from recent graduates with doctorates in mathematics education will be reported. Discussion of core areas, such as mathematics content, and the role mathematics departments assume in the preparation of doctorates in mathematics education will be discussed.
Panelists include Joan FerriniMundy, Michigan State University; James T. Fey, University of Maryland, College Park; Bob Glasgow, Southwest Baptist University; and Jeremy Kilpatrick, University of Georgia.

## College and University Quantitative Literacy Programs Across the Nation Poster Session <br> Thursday, 9:00 AM-11:00 AM organized by John G. Harvey, University of Wisconsin

Participants in this poster session will be faculty whose institutions have or are establishing quantitative literacy (QL) programs. The participants will share with the audience at this poster sessions the ways in which they have developed or are developing their programs including the courses that have been developed, the students who are required or expected to participate in them, the texts and locally developed materials that are used, and the pitfalls encountered in developing the program. This session will give those attending an opportunity
to (a) discuss programs and (b) exchange ideas and ways of instituting and maintaining these programs. Send proposals by December 10, 2000 to John G. Harvey, Department of Mathematics, University of Wisconsin, 480 Lincoln Drive, Madison, Wisconsin 53705-1388, jgharvey@facstaff.wisc.edu. The session is sponsored by the Subcommittee on Quantitative Literacy.

Growing an Oak Tree from an Acorn: Extending a New Program from a Few Innovators to the Whole Department Thursday, 10:45 AM-12:15 PM organized by Bonnie Gold, Monmouth University. and Richard Jardin. Keene State College

Many teaching innovations are tried, and quite a few appear to be successes at first; however, unless others in the department are persuaded of the value of the innovation, the effect is generally temporary. This panel will give examples of places where more systematic change occurred, and what was involved in causing this wider change.

Panelists include Morton Brown, University of Michigan, Ann Arbor; Jim Lewis, University of Nebraska; Bernard L. Madison, University of Arkansas; and David C. Arney, U.S. Military Academy. The panel is sponsored by the MAA Committee on the Teaching of Undergraduate Mathematics.

## Beyond the Writing of

 Principles and Standards for School MathematicsThursday, 10:45 AM-12:15 PM organized by Gary Martin, National Council of Teachers of Mathematics

The release of the Principles and Standards for School Mathematics marked only a milestone in the continuing work to improve mathematics education for all students. NCTM's efforts of dissemination, implementation, and research should involve continued discussion with the broader mathematical community. The Association Review Groups (ARGs) played a vital role in helping the writers conceptualize the document. Should the ARGs be continued or reconstituted? Are there other, more effective ways to work together? What would be the purpose of the continued collaboration? The session will provide an update of NCTM's plans and an open discussion of the role of ARGs.

Panelists include Lee V. Stiff, North Carolina State University; Glenda Lappan, Michigan State University; Mary Lindquist, Columbus State University; Gary Martin; and
John A. Thorpe, NCTM.

Funding Opportunities in the NSF Division of Undergraduate Education
Thursday, 10:45 AM-12:15 PM
organized by NSF. James H. Lightboume,
Harriet G. Taylor, Elizabeth J. Teles, and Lee L. Zia,
NSF Division of Undergraduate Education, will describe the various programs and funding opportunities for undergraduate education projects. A question and answer period will follow.

## Curriculum Foundations Project I: Reports from the Client Discipline Workshops

Thursday, 1:00 PM-2:30 PM
organized by William H. Barker, Bowdoin College;
Jack Bookman, Duke University; and Susanna S. Epp. DePaul University

CRAFTY organized a series of workshops, each focused on a particular client discipline, where mathematicians met with representatives from the discipline to discuss what mathematical experiences they wanted their students to have during the first two years of college. In this panel a participant from each of the workshops will summarize the discussions by addressing three questions: (1) What underlying philosophical concerns of the client discipline were expressed that would affect the nature of students' mathematical preparation? For example, what role should technology play in their mathematical education, and what are the relative emphases that should be placed on developing computational skill, problem solving ability, and deductive reasoning?
(2) What are the critical mathematical ideas students in the discipline need to learn? (3) Were there issues about which the participants in the workshop were not able to reach consensus, and, if so, what were they? A representative (either a mathematician or a member of the client discipline) will report on each of the following curriculum foundation workshops: Physics, Computer Sciences, Biological Sciences, Quantitative Social Sciences, Engineering, and Mathematics Education.

## Mathematics in Industry

Thursday, 1:00 PM-2:30 PM
organized by Philip E. Gustafson, Mesa State College
This panel will provide a forum for the mathematics community to better understand how mathematics is conducted outside academia. Panelists will share typical workday experiences in industry and how they use mathematics on the job. This will be especially informative for mathematicians interested in learning more about industry, how to better understand and interact with mathematicians in industry, and how to provide training for students interested in working in industry.
Panelists include Michael G. Monticino (moderator), University of North Texas; Tony Cabal, Eastman Kodak Company; Tami Carpenter, Telcordia Technologies;
James C. Cavendish, General Motors Corporation; Alan Lewis, Envision Financial Systems; Laura Mather, La Jolla Research Laboratories; and Michael E. Moody, Harvey Mudd College. The session is sponsored by the MAA Committee on Industrial and Government Mathematicians.

## How to Facilitate Change?

Thursday, 1:00 PM-2:30 PM
organized by Donald B. Small, U.S. Military Academy
Our society is changing at an increasing rate. Globalization and the information age, developments in learning theory, and changing needs of partner disciplines are challenging mathematics departments to reform curriculums. Although there are many faculty involved in developing innovative curriculums, moving these beyond a few experimental sections is a major hurdle for implementing change. This panel will discuss the need for creating an environment conducive to change and offer suggestions for encouraging and implementing change.

## Panelists include David C. Amey, U.S. Military

 Academy; Jim Lewis, University of Nebraska;Scott Hunt, Champion Paper Company; and
Scott Snook, Harvard Business School and U.S. Military Academy. The panel will be moderated by Kathleen Snook, U.S. Military Academy.

## Project NExT and Young Mathematician's Network Poster Session

Thursday, 2:00 PM-4:00 PM
organized by Kenneth A. Ross, University of Oregon, and Kevin E. Charlwood, Washburn University
The session will include exhibits from 30 or so new or recent Ph.D.s in the mathematical sciences, or from those still pursuing graduate study. Applications should be submitted to Ken Ross, ross@math.uoregon.edu, and Kevin Charlwood, zzcharlw@washburn.edu by December 10, 2000.

## Statistics and Mathematical Modeling: Lively Applications for the Classroom

 Thursday, 2:45 PM-4:15 PM, organized by $\mathbf{G}$. Elton Graves, Rose-Hulman Institute of Technology; Francis E. Su, Harvey Mudd College; and Catherine M. Murphy, Purdue University-CalumetThere will be two panelists: one to address statistics, the other mathematical modeling. Each will present recommendations for content and pedagogical strategies, lessons learned from their own teaching, and resources for faculty designing/teaching such courses. Organizers will follow-up with prepared questions. A question-andanswer session will complete the panel.
Panelists include Ami Radunskaya, Pomona College, and Allan J. Rossman, Dickinson College.

## New Directions in Moore Method Teaching <br> Thursday, 2:45 PM-4:15 PM

organized by James P. Ochoa, Hardin-Simmons University, and W. Ted Mahavier, Nicholls State University
This will be a panel session about new directions in the use of the Moore method. Panelists will address ways they have adapted the Moore method in undergraduate mathematics education. Innovations such as textbooks inspired by the Moore method, cooperative learning in calculus courses, web based courses, and distance learning will be discussed. This session will be a sequel to the MAA panel session "Discovery based teaching of undergraduate mathematics courses" at the 1999 Joint Mathematics Meeting, which featured panelists who are familiar with the traditional Moore method.

Panelists include Carol Jean Browning, Drury University; Charles A. Coppin, University of Dallas; Dale Daniel, Lamar University; Joseph W. Eyles, University of the Incarnate Word; and
Carol S. Schumacher, Kenyon College.

## The Mathematics of Lewis Carroll

Thursday, 7:00 PM-8:15 PM
organized by Robin J. Wilson,
The British Open University
This dramatic presentation by Robin Wilson and friends will contain episodes from the life of Lewis Carroll, with particular reference to his mathematics (both serious and otherwise) gleaned from his texts, mathematical puzzles, the 'Alice' books, and University pamphlets. In particular, material relating to his views on algebra, logic, geometry, and his attitudes to teaching will be presented.

## Curriculum Foundations Project II: Implications for the Mathematics Community <br> Friday, 9:00 AM-10:30 AM

organized by William H. Barker, Bowdoin Coilege, Jack Bookman, Duke University, Susanna S. Epp, DePaul University
In the panel Curriculum Foundations Project I, reports were made by attendees of the Curriculum Foundations Project client discipline workshops. In this panel, each panelist will analyze and synthesize the various views expressed by the representatives of the client disciplines and propose a curricular outline for the first two years of college mathematics. Panelists will address such issues as (1) When is it appropriate to offer multiple tracks for the same mathematical subject (e.g. business calculus)? (2) Should students in all client disciplines be exposed to some common core content, and, if so, what should it be? (3) Were any common philosophical concerns expressed by all the client disciplines, and, if so, what are the implications of these concerns for the mathematics curriculum? (4) is there any content that should be de emphasized, and, if $s o$, what is it?

## Proposal Writing Workshops for

NSF Projects in the Division of Undergraduate Education
Friday, 9:00 AM-10:30 AM
organized by James H. Lightbourne, NSF
Staff from the NSF Division of Undergraduate Education (DUE), including James H. Lightboume,
Harriet G. Jaylor, Elizabeth J. Teles, and Lee L Zia,
will lead a workshop on preparing proposals for DUE projects. Features of successful projects will be discussed and pending attendance a mock review of a proposal will be conducted. The session will conclude with a general question and answer period.

## College Algebra Reform Poster Session

 Friday, 9:00 AM-11:00 AMorganized by Donald B. Small, U.S. Military Academy, and Dorothy Hunter Huston and Kamalvand Huston, Tillotson College

Interest in reforming college algebra has grown rapidly over the past three years. Several new courses have been developed based on data analysis, functions, and modeling with strong emphasis on use of technology, developing communication skills, and small group
projects. Materials from these courses, from quantitative literacy courses, and from other related courses will be displayed. Submit proposals to Don Small, Department of Mathematical Sciences, U.S. Military Academy, West Point, NY 10996, don-small@usma.edu. Submission deadline is December $10,2000$.

## LiveMath Maker-The Future of Mathematics on the Internet

Friday, 1:00 PM-2:30 PM
organized by Joan Bookbinder, Theorist Interactive
Come learn to create with LiveMath Maker. LiveMath Maker is a revolutionary new computer algebra system (CAS) used to produce LiveMath "notebooks". These symbolically correct notebooks may be shared with the world via the World-Wide-Web using the free LiveMath Plug-In. The math you create is LIVE, not static. Similar to a spreadsheet in the way a change in one value will ripple throughout the calculations, LiveMath allows you to perform algebraic, numerical, and graphical experimentation with its dynamic recalculation feature. The notebooks do not just "do the math" but can be set up to show the steps and procedures of mathematics. Change one value and the notebook updates to reflect the change. Post it to the web and anyone with the free plug-in can interact with the notebook through a browser allowing exploration of key mathematical topics.

## Evolving Interdisciplinary <br> Core Curriculum

Friday, 1:00 PM-2:30 PM,
organized by Donald B. Small, U.S. Military Academy
Core programs ( $2-4$ semesters) are challenged to address: (1) content preparation for downstream courses; (2) student growth needs; and (3) societal needs. Major changes occurred in core programs during the early 1990s. Other major changes are underway. The panelists will address the role of a core program and how it is evolving.
Panelists include Michael E Moody, Harvey Mudd College; Joseph D. Myers, U.S. Military Academy; Richard Plumb, SUNY at Binghamton; and John L Scharf, Carroll College. The panel will be moderated by Gary W. Krahn, U.S. Military Academy.

## Research in Undergraduate Mathematics Education (RUME): Field of Study, or a Figment of Our Imagination? <br> Friday, 1:00 PM-2:30 PM <br> organized by Joan Ferrini-Mundy, <br> Michigan State University

For the past several years the community of individuals in the mathematical professional societies with professional interest in questions of the teaching and learning of undergraduate mathematics education has grown and become more visible. Yet many mathematicians contend that there is no "field" of RUME. Panelists will present arguments about what constitutes an academic field of study; what are qualities of research and research communities generally, and in mathematics education; what standards of evidence and reporting are typical in educational research; what challenges do "RUMErs" face within the mathematical community. Panelists will each use one or two research papers as central examples in framing their remarks. A list of the papers will be available from the organizer prior to the meeting.

A Report on the ASA Undergraduate Statistics Education Initiative (USEI) and Curriculum Guidelines
Friday, 1:00 PM-2:30 PM

## organized by

Dexter C. Whittinghill, Rowan University, and John P. Holcomb, Youngstown State University

The mission of the workshop held in April 2000 was to develop curriculum guidelines for formal study of statistics by undergraduates. This consisted of program requirements for both formal degrees in statistics and recommendations for courses or tracks in statistical science in conjunction with a degree in another discipline. Toward these goals, the workshop participants discussed issues such as prioritizing topics, requiring nonstatistics courses, and determining the number of theory and application courses, to name a few. The panel discussants will present the consensuses that emerged from this workshop.
Panelists include G. Rex Bryce, Brigham Young University;
Robert V. Hogg, University of lowa, lowa City; and Dick Scheaffer, University of Florida.

## Assimilation of

Adjunct Faculty
Friday, 1:00 PM-2:30 PM organized by Bettye Anne Case, Florida State University;
Kevin E. Charlwood, Washburn University; and Stephen B. Rodi, Austin Community College
This panel will discuss issues relevant to the departmental life and status of nontenure-accruing faculty (adjunct, part-time or temporary) who today handle an increasingly large share of mathematics department teaching. Successful orientation, supervision, and assimilation of these faculty often determine the effectiveness of a lower division mathematics program. The panel will be both pragmatic and reflective, dealing with nitty-gritty details of the routine daily functioning of such faculty as well as with their broader role in student advising, curriculum development, and departmental decisions and philosophy.
The panel will be moderated by Bettye Anne Case, and includes

## Kevin E. Charlwood,

Stephen B. Rodi, and Scott Herriott, Maharishi University of Management. The panel is sponsored by the Joint MAA-AMS Committee on Teaching Assistants and Part-Time Instructors.

SUMMA Panel Discussion
Friday, 1:00 PM-2:30 PM organized by William A. Hawkins Jr., director of the SUMMA (Strengthening Underrepresented Minority Mathematics Achievement) program
Presentations will be given on intervention programs for minority precollege students and faculty.

Panelists will be John H. Harris, Lemoyne-Owen College; Carlos G. Spaht, Louisiana State University, Shreveport; and
Viji K. Sundar, California State University Stanislaus. Ample time will be available for questions.

## Mathematical Experiences for Students Outside the Classroom

Friday, 1:00 PM-3:20 PM organized by Richard L. Poss,
St. Norbert College, and Thomas E. Kelley, Metropolitan State College of Denver

Mathematics "happens" outside the classroom and, in fact, many math majors are drawn to the subject through an event sponsored by a Student Chapter or Math Club. This session seeks presentations by academic, industrial, business, or student mathematicians. Descriptions of nonclassroom activities could include, but are not limited to, special lectures, workshops for students, Math Days, Math Fair, research projects for students, Career Days, recreational mathematics, problem solving activities, and student consultants. Applications should be submitted to Rick Poss at possr@mail.snc.edu by December 1,2000. The application should include name, address, phone number, email address, title of presentation, and a one page description of the activity. Presentation time is limited and there is no guarantee that all submissions can be accepted.
Applicants will be notified by December 15 , whether or not their proposal has been accepted. This session is sponsored by the MAA Committee on Student Chapters.

NSF Division of Undergraduate Education Projects in the Course Poster Session
(Curriculum and Laboratory
Improvement Program)
Friday, 1:00 PM-3:00 PM
organized by Jon W. Scott, Montgomery College
NSF Principal Investigators (PIs) of NSF Division of Undergraduate Education (DUE) projects will present poster displays describing their projects and current progress and outcomes. Pls will be available to talk with interested parties about adapting and/or implementing project materials and approaches.

## Presentations by Teaching Award Recipients

 Friday, 3:30 PM-5:00 PMWinners of the Awards for Distinguished College or University Teaching of Mathematics will give presentations on the secrets of their success.

## MAA-YMN Panel on <br> Balancing Career and Family

Friday, 5:00 PM-6:30 PM
organized by Heather Ames Lewis, Nazareth College, and John A. Kuchenbrod, Emory and Henry College
The challenge that mathematicians face in maintaining both their academic and nonacademic lives will be addressed. Panelists will represent a wide variety of "families," from significant others and families of two to those including older children.

## Informal Session on Actuarial Education

Friday, 5:00 PM-7:00 PM
organized by James W. Daniel, University of Texas
This informal session sponsored by the Actuarial Faculty Forum provides an opportunity for those involved in actuarial education, interested in it, or curious about it, to get together to discuss common concerns such as the major changes in the actuarial exam systems that will have just taken place.

## Association for Research on Undergraduate

 Mathematics Education SIGMAA Reception and Business MeetingFriday, 5:00 PM-7:00 PM
organized by Julie M. Clark, Emory and Henry College
ARUME is a group formed for mathematics educators and professional mathematicians interested in research on undergraduate mathematics education. There will be a welcoming address, business meeting, election of officers, an invited address exemplifying research on undergraduate mathematics, followed by a reception.

## Environmental Mathematics

Friday, 6:30 PM-8:00 PM
organized by Ben A. Fusaro, Florida State University, and directed by Lothar A. Dohse, University of North Carolina at Asheville

This dramatic presentation will consist of three skits, acted by your colleagues. Humor will be used to carry the message that, unlike oversize lawns, gas guzzlers and developers, mathematics can be helpful in solving environmental problems. The session is sponsored by the Committee for Mathematics in the Environment.

SIGMAA on Statistics Education Reception and Business Meeting
Friday, 7:00 PM-9:00 PM
organized by Dexter C. Whittinghill, Rowan University
This group will meet in order to discuss an agenda of topics related to the teaching of undergraduate statistics. There will be a welcoming address, business meeting, and election of officers, followed by a reception.

## Writing and the Mathematics Classroom

Saturday, 9:00 AM-10:30 AM organized by John E. Meier, Lafayette College, and Thomas W. Rishel, MAA

Writing has emerged as a useful tool for teaching and learning mathematics. In this session, the panelists will add to the growing list of writing projects that have proven to be effective in the teaching of mathematics. They will also address practical and theoretical concerns such as assignment design; evaluation of student responses; the effect of writing in the classroom; and how writing assignments impact student performance on traditional graded events, such as homework and exams.
Panelists include Annalisa Crannell, Franklin and Marshall College; Julian F. Fleron, Westfield State College; Philip R. Hotchkiss; Westield State College; John E. Meier; Morris Orzech, Queen's University; and Thomas W. Rishel, MAA

## The Pedagogical Potential of Computer

 Symbolic Algebra in the Teaching of Precalculus and CalculusSaturday, 9:00 AM-10:30 AM
organized by Bernhard Kutzler, University of Linz, and Helmut Heugl, Technical University of Vienna

A two-level framework for understanding, categorizing, and planning the use of technology in teaching and learning mathematics is presented. At the first level we distinguish between the two basic uses of "automation" and "compensation". At the second level we discuss the four applications as pedagogical tools for "trivialization", "experimentation", "visualization", and "concentration". Based on this framework we develop the "scaffolding method" as a pedagogically justified sequence of using and not using technology to achieve a given teaching goal. The method is demonstrated with examples. The implication of technology to assessment is discussed.

## Restructuring the Mathematics <br> Bachelor Degree

Saturday, 9:00 AM-10:30 AM
organized by Lisa Townsley Kulich,
Benedictine University
The onset of the 21st century is an appropriate time for mathematics departments to evaluate and renew their undergraduate major. Adjustments in the mathematics major program may arise from external demands for mathematicians with industrial training, internal development of interdisciplinary studies, education or research emphases, or technological innovations. Panelists at this discussion, sponsored by CUPM, will expound on revisions of the mathematics major at their particular institution. The revisions are at various stages of completion, from initial grass-roots agents of change to implementation to long-term evaluation of the changes. The progress of the CUPM study of the major will also be presented.

Panelists include Patricia Rogers, York University; Richard A. Gillman, Valparaiso University; David C. Amey, U.S. Military Academy; Donald W. Vander Jagt, Grand Valley State University; and Thomas R. Berger, Colby College and CUPM.

## Professors for the Future

Programs in Mathematics
Saturday, 1:00 PM-2:30 PM
organized by Thomas W. Rishel, MAA
Professors for the Future Programs have proven to be highly successful in preparing graduate students for life in academe. In this panel, faculty and graduate students will describe the impact their programs have had on themselves and their current and future employers.
Panelists include Amy Cohen-Corwin, Rutgers University; Luise Charlotte Kappe, Binghamton University; Matthias Kawski, Arizona State University; Kathryn L. Nyman, Cornell University; Eileen T. Shugart, Virginia Polytechnic Institute and State University; and Virginia M. Warfield, University of Washington. The session is sponsored by the Joint Committee on Professors for the Future.

Articulation: Is the Transition to College Mathematics As Smooth As We Think It Is? Saturday, 1:00 PM-2:30 PM organized by Sheldon P. Gordon, SUNY at Farmingdale and Bemard L Madison, University of Arkansas

The MAA has launched a major initiative on articulation in response to a call from the Secretary of Education to ease the mathematical transitions between high school and college, between two-year institutions and four-year colleges and universities, and between different colleges. The secondary curriculum has been changing dramatically in response to the NCTM Standards. College curricula have changed because of efforts to reinvigorate calculus and other courses. Placement tests are often still based on very traditional courses and learning experiences that growing numbers of students have not been through. This panel session will address all of these issues, including the role of the College Board, and what may emerge as a result of the MAA initiative and the efforts of the Task Force on Articulation.
The panels will be moderated by Linda Boyd,
Georgia Perimeter College. Panelists include
Bemard L Madison, University of Arkansas;
Lee Jones, Executive Director of AP program at the College Board; Susan L. Forman, Bronx Community College; and Daniel Kennedy, Baylor School. The panel is sponsored by the MAA Task Force on Articulation.

## Open Discussion on

Reforming College Algebra
Saturday, 2:45 PM-4:15 PM
organized by Donald B. Small, U.S. Military Academy
Interest in reforming college algebra has grown rapidly over the past three years. Several new courses have been developed based on data analysis, functions, and modeling with strong emphasis on use of technology, developing communication skills, and small group projects. Comments on these courses, on state legislative programs related to college algebra, on college algebra as a "life skills" course, and on the need for algebraic skills are among the topics that will be discussed. The session is open to everyone.

Panelists include Della D. Bell, Texas Southern University, and Sarah Bush, Wiley College.

## Mathematics and the

Mathematical Sciences in 2010: What Should Graduates Know?
Saturday, 2:45 PM-4:15 PM organized by Thomas R. Berger, Colby College

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. The MAA Committee on the Undergraduate Program in Mathematics (CUPM) just announced a series of papers about the undergraduate majors. Now the Committee is soliciting experiences and ideas from the profession. We invite you to participate in this discussion of the undergraduate majors.

## Teaching to Attract Potential Teachers

Saturday, 3:45 PM-5:15 PM
organized by Mary Robinson, University of New Mexico-Valencia Campus; Janet P. Ray, Seattle Central Community College; and Gary L. Britton, University of Wisconsin Washington County

There is a growing national awareness of the need to recruit and prepare mathematically capable students for the teaching profession at all levels. Faculty and institutions are considering a wide variety of strategies to accomplish this goal, from developing new teacher preparation initiatives, to exploring how existing general education and elective mathematics courses can stimulate interest in mathematics teaching. Panelists will discuss programs that have been successful and ideas for the future.
The panel, moderated by Jay A. Malmstrom, Oklahoma City Community College, includes Joanne Peeples, El Paso Community College; Patricia Stone, Tomball College; Susan D. Parsons, Cerritos College; and Amold M. Ostebee, St. Olaf College. The session is sponsored by the MAA Committee on Two Year Colleges.

## MAA Student Activities

## Undergraduate Student Poster Session

 Friday, 5:00 PM-7:30 PM organized by Mario U. Martelli, Claremont McKenna CollegeSend title and one-page abstract including authors' name, address, phone number, email and the name of the faculty advisor to Mario Martelli at mario_martelli@mckenna.edu, or Mathematics Department, Claremont McKenna College, Claremont, CA 91711 by December 10, 2000. Notification of acceptance will be emailed two weeks after the abstract has been received. Apply early! Space is limited. The session is reserved to undergraduates. First-year graduate students may submit posters about work done while undergraduates. Posters' content cannot be purely expository. The best posters will be awarded a monetary prize with funds provided by the MAA, AMS, and CUR. Tri-fold self-standing $48^{\prime \prime} \times 36^{\prime \prime}$ table-top posterboard will be provided. Additional material or equipment is the responsibility of each presenter.

Information on the special Student Lecture on Friday evening is included in the MAA Invited Address section.

Please see the listing under Mathematical Experlences for Students Outside the Classroom, on Friday, 1:00 PM-3:20 PM, in the Other MAA Sessions section.
Student submissions
are invited.
Other student opportunities under the Social Events section.

OTHER MAA EVENTS

## MAA Short Course

Knots in Science<br>Monday and Tuesday, January 8 and 9 organized by De Witt L. Sumners, Florida State University.

Knot theory has recently evolved from an area in "pure" mathematics to include scientific applications in biology, chemistry, fluid mechanics and physics. This development is not surprising when one realizes that knots are one-dimensional strings that explore the entanglement complexity possible in three-dimensional space. Many physical objects are string-like; macromolecules such as polyethylene and DNA exhibit knotting, and the DNA knots are diagnostic of cellular metabolic function. Vortices that form in fluid motion can be long string-like objects, and vortex entanglement has physical ramifications. This short course will introduce knots, and present introductions to many fascinating scientific applications for knots.

Speakers and their talks include Colin C. Adams, Williams College, Introduction to knots;
Louis H. Kauffman, University of Illinois at Chicago, Knots in physics; Renzo L. Ricca, University College, London, Vortex and magnetic knots in fluid systems; Jonathan Simon, University of lowa, lowa City, Physical knots; Andrzej Stasiak, University of Lausanne, Ideal knots; De Witt L. Sumners, Knots in DNA; Stuart G. Whittington, Department of Chemistry, University of Toronto, Knots in Polymers.

Please note that there is a separate registration fee for this Short Course. To register in advance, please use the Advance Registration/Housing form found at the back of this issue or see http:/huw.amsorg/amsmtgs/2025_intrahtml. Advance registration fees are $\$ 125 /$ member; $\$ 175 /$ nonmember; and $\$ 50 /$ student, unemployed, emeritus. On-site registration fees are $\$ 140 /$ member; $\$ 190 /$ nonmember: and $\$ 60 /$ student, unemployed, emeritus.

Knot theory has recently evolved from an area in "pure" mathematics to include scientific applications in biology, chemistry, fluid mechanics and physics.

## Other MAA Events

Board of Governors<br>Tuesday, 8:30 AM-4:00 PM

## Section Officers

Wednesday, 4:30 PM-6:30 PM

## Business Meeting

Saturday, 11:10 AM-11:40 AM

2001 JOINT MATHEMATICS MEETINGS NEW ORLEANS MARRIOTT AND SHERATON HOTELS NEW ORLEANS, LOUISIANA

See the listings for various receptions in the Social Events section

## 107th Annural Mecting of the AMS

## AMS Invited Addresses

Bonnie Berger, Massachusetts Institute of Technology
Title to be announced
Thursday, 2:15 PM
Ingrid Daubechies, Princeton University
Analog-to-digital conversion: A case study
of interaction between mathematicians and electrical engineers
Saturday, 2:15 PM
Igor B. Frenkel, Yale University
Title to be announced
Friday, 9:00 AM
Ronald L. Graham, University of California San Diego
Title to be announced
(AMS Josiah Willard Gibbs Lecture)
Wednesday, 8:30 PM
Mark L Green, University of California Los Angeles
New perspectives on algebraic cycles
Thursday, 3:20 PM
Michael J. Hopkins, MIT
Title to be announced
Wednesday, 10:05 AM
János Kollár, Princeton University
Title to be announced
(AMS Colloquium Lectures)
Wednesday, Thursday, and Friday, 1:00 PM

## AMS Special Sessions

Analysis on Infinite Dimensional Spaces (in honor of Leonard Gross)
Hui-Hsiung Kuo and Ambar N. Sengupta,
Louisiana State University
Friday and Saturday mornings, and Saturday afternoon.
Analytic Number Theory
Dorian Goldfeld, Columbia University
Friday and Saturday mornings and afternoons.
Applications of Mathematics to Human Physiology and Medicine
James Cassatt, National Institutes of Health, and Michael C. Reed, Duke University Friday and Saturday mornings and afternoons.

Asymptotic Behavior of Difference Equations with Applications
Vajko L. Kocic, Xavier University, Abdul-Aziz Yakubu, Howard University, and Gerasimos Ladas, University of Rhode Island
Wednesday and Thursday mornings, and Wednesday afternoon.

Braid Groups and Configuration Spaces
Daniel C. Cohen and Neal W. Stoltzfus,
Louisiana State University
Wednesday morning, and
Wednesday and Thursday afternoons.
Commutative Rings and Monoids
Scott T. Chapman, Trinity University, and
Evan G. Houston, University of North Carolina at Charlotte
Wednesday morning, and
Wednesday and Thursday afternoons.
Computational Algebraic Geometry for Curves and Surfaces
Mika K. Seppala, Florida State University, and Emil J. Volcheck, National Security Agency
Friday and Saturday mornings, and Friday afternoon.

Discovery Learning: The Moore Method in American Mathematics
John W. Neuberger, University of North Texas, and Judy A. Kennedy, University of Delaware
Wednesday morning

## Discrete Geometry

Andras Bezdek, Auburn University
Friday and Saturday afternoons, and Saturday morning.
Function Theory, Differential Equations
and Functional Equations
Gary G. Gundersen, University of New Orleans,
Upo Laine, University of Joensuu, and
Enid M. Steinbart, University of New Orleans
Wednesday and Thursday mornings,
and Thursday afternoon.
Geometric Group Theory
Stephen G. Brick and Igor Mineyev, University of South Alabama, and Jon M. Corson, University of Alabama
Wednesday and Thursday afternoons, and Thursday morning.

Geometry and Topology of Low
Dimensional Manifolds
Slawomir Kwasik and Terry Lawson, Tulane University
Friday and Saturday mornings, and Friday afternoon.
Graduate and Postdoctoral Education
in Arithmetical Algebraic Geometry:
The Arizona Winter School
Douglas L Ulmer and William G. McCallum,
University of Arizona
Wednesday morning, and
Wednesday and Thursday afternoons.
Group Cohomology and Applications
to Homotopy Theory and
Representation Theory
Alejandro Adem, University of Wisconsin, Madison, and Jon F. Carlson, University of Georgia
Friday and Saturday mornings, and Friday afternoon.

## AMS INVITED ADDRESSES

## AMS SPECIAL SESSIONS CONTINUED <br> AMS <br> CONTRIBUTED PAPERS

OTHER AMS SESSIONS

OTHER AMS EVENTS

## AMS SHORT COURSE

Integral Transforms
Gestur Olafsson, Louisiana State University, Gunter Lumer, University of Mons-Hainaut, and Frank Neubrander, Louisiana State University
Friday and Saturday mornings and afternoons
Integrals and Series
throughout Mathematics
Victor H. Moll, Tulane University, and
George Boros, University of New Orleans
Wednesday and Thursday mornings, and Wednesday afternoon
Interaction of Inverse Problems and Image Analysis
M. Zuhair Nashed, University of Delaware, and Otmar Scherzer, Ludwig-MaximiliansUniversität Munchen
Friday morning, and Friday and Saturday afternoons
Model Theory
Steven A. Buechler and Sergei Starchenko, University of Notre Dame
Thursday morning and afternoon

## Nonlinear Evolution Equations and Applications

Ralph A. Saxton, University of New Orleans, David H. Wagner, University of Houston, and Katarzyna Saxton, Loyola University
Wednesday and Thursday mornings, and Thursday afternoon

Operator Theory on Function Spaces
Zhijian Wu, University of Alabama, and Dechao Zheng, Vanderbilt University
Wednesday and Thursday mornings, and Wednesday afternoon
PDE Models in Population Biology and Epidemiology
J. M. Cushing, University of Arizona, Eric T. Funasaki, Georgia Southern University, Shandelle M. Henson, College of William and Mary, and Anna Maria Spagnuolo, Texas A\&M University
Wednesday and Thursday afternoons, and Thursday morning
Partial Differential Equations and Geometric Implications
Vadimir E. Shklover, Northwestern University
Friday and Saturday afternoons, and Saturday morning
Representation Theory of Finite
and Algebraic Groups
Zongzhu Lin, Kansas State University,
Daniel K. Nakano, Utah State University, and
Cornelius Pillen, University of South Alabama
Wednesday and Thursday afternoons, and Thursday morning
Stochastic Analysis and Applications
Padmanabhan Sundar and Guillermo S. Ferreyra, Louisiana State University
Friday morning, and Friday and Saturday afternoons.

## AMSContributedPapers

There will be sessions for contributed papers of ten minutes' duration. Contributed papers will be grouped by related Mathematical Subject Classifications into sessions insofar as possible. The author(s) and their affiliation(s) and the title of each paper accepted will be listed in the program along with the date and time of presentation. Abstracts will be published in Abstracts Presented to the American Mathematical Society and should be submitted electronically.

Send a blank message to abs-submit@ ams.org and type help as the subject to see your electronic options.
See the beginning of this announcement for pertinent deadlines.

## Other AMS Sessions

Committee on the Profession Panel Discussion
Wednesday, 4:30 PM-6:00 PM
Committee on
Science Policy Panel Discussion
Friday, 2:30 PM-4:00 PM
Committee on
Science Policy Government Speaker
Friday, 4:20 PM-5:10 PM
Committee on Education Panel Discussion
Saturday, 8:30 AM-10:00 AM

## Other AMS Events

Council Meeting
Tuesday, 1:00 PM-10:00 PM
Business Meeting
Saturday, 11:45 AM-12:15 PM

## AMS Short Course

## Mathematical Biology

Monday and Tuesday, January 8 and 9
organized by James Sneyd, Massey University, New Zealand.

The goal of this short course is to present a selected number of topics in mathematical biology to a mathematical audience. It will show how research in the field is done, what kind of mathematics is used, how one might best enter the field, what the outstanding questions are, as well as a brief historical survey of each topic so as to put current research into perspective.

Speakers include James P. Keener, University of Utah; Kenneth L. Lange, University of California Los Angeles; Alan S. Perelson, Santa Fe Institute, Los Alamos National Laboratory; David Terman, Ohio State University; and Daniel A. Tranchina, Courant Institute, New York University.

There is a separate registration fee for this short course. Advance fees are $\$ 80$ ( $\$ 35$ for student/unemployed/ emeritus); on-site fees are $\$ 95$ ( $\$ 45$ for student/ unemployed/emeritus)

## Activities of Other Organizations

Several organizations or special groups are having receptions or other social events. Please see the Social Events section of this announcement for details.

## Association forSymbolic Logic (ASL)

This two-day program on Friday and Saturday will include Invited Address and Sessions of Contributed Papers.

## Invited Addresses

(days, times and titles to be announced):
Peter A. Cholak, Notre Dame University; Tamara J. Hummel, Allegheny College; Alexander S. Kechris, California Institute of Technology; Paul Larson, University of Toronto; Thomas W. Scanlon, University of California Berkeley; and Lou P. van den Dries, University of Illinois, Urbana-Champaign.

## Association for Women in Mathematics (AWM)

Twenty-Second Annual
Emmy Noether Lecture
Thursday, 9:00 AM-9:50 AM
Sun-Yung Alice Chang, Princeton University and
University of California Los Angeles
Nonlinear Equations in
Conformal Geometry
A dinner in honor of the lecturer will be held on Wednesday evening. See the Social Events section for details on how to participate.

AWM and K-8 Education:
What Should We Do?
Wednesday, 2:45 PM-4:05 PM
organized by Suzanne Lenhart University of Tennessee, Knoxville, and Jean Taylor, Rutgers University

Panelists include Shirley Malcom, American Association for the Advancement of Science; Judith Roitman, University of Kansas; Erica D. Voolich, Solomon Schechter Day School; Virginia M. Warfield, University of Washington; and one other to be announced.

At the conclusion of the panel discussion, AWM will recognize the Alice I. Schafer Prize winner, runner-up, and honorable mention honorees. Note that formal prize winner announcements are made at the Joint Prize Session on Thursday afternoon (see the AWM inclusion in the Joint Sessions section at the beginning of this announcement.)

## Workshop

Saturday, 8:30 AM-5:00 PM
With funding from the Office of Naval Research and the National Science Foundation (pending final funding approval), AWM will conduct its workshop for women graduate students and women who have received the Ph.D. within the last five years.
Twenty women mathematicians have been selected in advance of this workshop to present their research. The selected graduate students will present posters, and the recent Ph.D.'s will give 20 -minute talks. Travel funds are provided to the the twenty selected presenters. The workshop will also include a panel discussion on issues of career development and a luncheon. Participants will have the opportunity to meet with other women mathematicians at all stages of their careers. All mathematicians (female and male) are invited to attend the entire program. Departments are urged to help graduate students and recent Ph.D.'s who do not receive funding to obtain some institutional support to attend the workshop and the associated meetings. The deadline for applications for presenting and funding has expired. Inquiries regarding future workshops may be made to AWM by telephone: 301-405-7892, by e-mail: awm@math.umd.edu, or visit http://uww.awm-math.org.

AWM seeks volunteers to lead discussion groups and to act as mentors for workshop participants. If you are interested in volunteering, please contact the AWM office.

## Reception

Wednesday, 9:30 PM-11:00 PM
See the listing in the Social Events section of this announcement.

## National Association of Mathematicians (NAM)

Granville-Brown Session of Presentations<br>by Recent Doctoral Recipients in the Mathematical Sciences<br>Friday, 2:15 PM-5:00 PM<br>Cox-Talbot Address<br>Friday after the banquet.

## Panel Discussion

Saturday, 9:00 AM-9:50 AM

## Business Meeting

Saturday, 10:00 AM-10:50 AM

## William W. S. Claytor Lecture

Saturday, 1:00 PM
See details about the banquet on Friday in the Social Events section.

## ACTIVITIES OF OTHER

 ORGANIZATIONSASSOCIATION FOR<br>SYMBOLIC LOGIC (ASL)

ASSOCIATION FOR WOMEN IN MATHEMATICS (AWM)

NATIONAL ASSOCIATION OF MATHEMATICIANS (NAM)

Business Meeting
Wednesday, 4:05 PM-4:25 PM

# ROCKY MOUNTAIN MATHEMATICS CONSORTIUM (RMMC) 

YOUNG
MATHEMATICIANS NETWORK (YMN)

ANCILLARY CONFERENCE

## SOCIAL EVENTS

## National Science Foundation (NSF)

The NSF will be represented at a booth in the exhibit area. NSF staff members will be available to provide counsel and information on NSF programs of interest to mathematicians.

The booth is open the same days and hours as the exhibits. Times that staff will be available will be posted at the booth.

## PiMuEpsilon(PME)

Council Meeting
Friday, 8:00 AM-11:00 AM

## RockyMountain Mathematics Consortium (RMMC)

Board of Directors Meeting<br>Friday, 2:15 PM-4:10 PM

## YoungMathematicians Network(YMN)

Concerns of Young Mathematicians: A Town Meeting<br>Wednesday, 7:15 PM-8:15 PM<br>organized by Kevin E. Charlwood, Washburn University<br>This panel discussion will focus on the current primary concerns for young mathematicians, with emphasis on audience participation.

Also see details about the poster session (Thursday afternoon) and panel discussion (Wednesday afternoon) cosponsored by YMN under the Other MAA Sessions listings.

## AncillaryConference


#### Abstract

American Statistical Association (ASA): Course for statistics instructors at universities, junior colleges, and high schools! Mathematicians and others who teach courses in introductory statistics will be pleased to know that the course "Teaching Statistics with Active Learning" will again be offered on January 8 and 9 preceding the Joint Mathematics Meetings in New Orleans.

Presenters for this two-day LearnSTAT course are Beth L. Chance, California Polytechnic State University, and Allan J. Rossman, Dickinson College. The course is designed for instructors from universities, colleges, junior colleges and high schools. It will actively involve participants with hands-on investigations that can be adopted for use with students. The course is of particular value to those who teach statistics but have little training in the discipline.

Cost is $\$ 225$ for both days. Visit the LearnSTAT site at http://wuw.amstatorg/education/learnstathtm/


for complete course description, registration and hotel information. Inquiries can be directed to learnstat@amstatorg.

## Social Events

It is strongly recommended that for any event requiring a ticket, tickets should be purchased through advance registration. Only a very limited number of tickets, if any, will be available for sale on site. If you must cancel your participation in a ticketed event, you may request a $50 \%$ refund by returning your ticket(s) to the Mathematics Meetings Service Bureau (MMSB) by December 29. After that date no refunds can be made. Special meals are available at banquets upon advance request, but this must be indicated on the Advance Registration/ Housing Form.

## Student Hospitality Center

Wednesday-Friday, 9:00 AM-5:00 PM, and
Saturday, 9:00 AM-3:00 PM
organized by Richard Neal, University of Oklahoma

## Graduate Student Reception <br> Wednesday, 5:00 PM-6:30 PM

Mathematicians representing a wide range of disciplines will join interested graduate students at an informal reception. Complimentary food and beverages will be served. NOTE: This event is only for students who sign up on the Advance Registration/Housing (ARH) form.

## Reception for First-Time Participants

The MAA Committee on Membership and the AMS are co-sponsoring a social hour on Wednesday from 6:00 PM-7:00 PM.
All participants (especially first-timers) are encouraged to come and meet some old-timers and pick up a few tips on how to survive the environment of a large meeting. Refreshments will be served.

## Mathematical Sciences Institutes Reception

Wednesday, 5:30 PM-7:30 PM
CRM, DIMACS, the Fields Institute, IMA, IPAM, MSRI, and PIMS invite you to a reception where you can talk to their representatives, and learn about their current and future programs and activities (or reminisce about their past ones). The participating institutes are Centre de Recherches Mathématiques (Montréal), the Center for Discrete Mathematics and Theoretical Computer Science (New Jersey), the Fields Institute (Toronto), the Institute for Mathematics and Its Applications (Minneapolis), the Institute for Pure and Applied Mathematics at UCLA (Los Angeles), the Mathematical Sciences Research Institute (Berkeley), and the Pacific Institute for the Mathematical Sciences (Vancouver).
All participants are invited to a dinner to honor AWM's Noether Lecturer on Wednesday. A sign-up sheet for those interested will be located at the AWM table in the exhibit area and also at the AWM panel discussion.

## AWM Reception

There is an open reception on Wednesday at 9:30 PM after the AMS Gibbs Lecture. This has been a popular, well-attended event in the past.

## MAA Two-Year College Reception <br> Thursday, 5:45 PM-7:00 PM <br> sponsored by Addison Wesley Longman

## MER Banquet

There will be a cash bar beginning at 6:30 PM Dinner will be served at 7:30 PM

The Mathematicians and Education Reform (MER) Network welcomes all mathematicians who are interested in precollege, undergraduate, and/or graduate educational reform to attend the MER banquet on Thursday evening. This is an opportunity to make or renew contacts with other mathematicians who are involved in education projects and to engage in lively conversation about educational issues. The after-dinner discussion is an open forum for participants to voice their impressions, observations, and analyses of the current education scene. Tickets are $\$ 46$ each, including tax and gratuity.

## Joint Pi Mu Epsilon and MAA Student Chapter Advisors' Breakfast <br> Friday, 7:00 AM-8:00 AM <br> contact: Richard Jarvinen <br> rdjarvinen@vax02.winona.msus.edu.

## Purdue University Department of Mathematics Reception <br> Friday 5:00 PM-7:00 PM <br> All alumni, friends, and staff are welcome.

NAM Banquet
Friday, 5:30 PM to 8:00 PM
The National Association of Mathematicians will host a banquet on Friday evening. A cash bar reception will be held at 5:30 PM and dinner will be served at 6:00 PM Tickets are \$43 each, including tax and gratuity.

## AMS Banquet

The banquet will be held on Saturday with a cash bar reception at 6:30 PM and dinner at 7:30 PM.

As a fitting culmination to the meetings, the AMS banquet provides an excellent opportunity to socialize with fellow participants in a relaxed atmosphere. The participant who has been a member of the Society for the greatest number of years will be recognized and will receive a special award. Tickets are $\$ 44$, including tax and gratuity.

## Other Events of Interest

## AMS Information Booth

All meeting participants are invited to visit the AMS Information Booth during the meeting.

Complimentary coffee and tea will be served. A special gift will be available for participants, compliments of the AMS. The membership manager of the Society will be at the booth to answer questions about membership.

## Book Sales and Exhibits

All participants are encouraged to visit the book, education media, and software exhibits from noon to 5:30 PM on Wednesday, 9:30 AM to 5:30 PM on Thursday and Friday, and 9:00 AM to noon on Saturday.

Books published by the MAA and AMS will be sold at discounted prices somewhat below the cost for the same books purchased by mail. These discounts will same books purchased by mail. These discounts will official Meetings badge. Most major credit cards will be official Meetings badge. Most major credit cards will be
accepted for book sale purchases at the Meetings. Also, AMS electronic products and e-MATH will be demonstrated. Participants visiting the exhibits will be asked to display their Meetings badge or acknowledgment of advance registration from the Mathematics Meetings Service Bureau in order to enter the exhibit area.

## Mathematical Sciences Employment Center

Those wishing to participate in the Mathematical Sciences Employment Center should read carefully the important article about the Center beginning on page 33 in this issue of FOCUS or at http://uww.ams.org/emp-reg/.


2001
JOINT
MATHEMATICS
MEETINGS
new orleans
marriott and
Sheraton hotels
NEW ORLEANS, louisiana JANUARY 10-13, 2001

## Registering <br> in Advanceand Hotel Accommodations

## HOW TO REGISTER IN ADVANCE:

The importance of advance registration cannot be overemphasized. Advance registration fees are considerably lower than the fees that will be charged for registration at the meeting. Participants registering by November 14 will receive their badges, programs, and tickets purchased in advance by mail approximately three weeks before the Meetings, unless they check the appropriate box to the contrary on the Advance Registration/Housing Form.

Because of delays that occur in U.S. mail to Canada, it is strongly suggested that advance registrants from Canada choose to pick up their materials at the Meetings. Because of delays that occur in U.S. mail to overseas, materials are never mailed overseas. There will be a special Registration Assistance Desk at the Joint Meetings to assist individuals who either do not receive this mailing or who have a problem with their registration. Please note that a $\$ 5$ replacement fee will be charged for programs and badges that are mailed but not taken to New Orleans.

Acknowledgments of registrations will be sent by email to the email addresses given on the Advance Registration/Housing Form. If you do not wish your registration acknowledged by email, please mark the appropriate box on the form.

## EMAIL ADVANCE REGISTRATION:

This service is available for advance registration and housing arrangements by requesting the forms via email from meetreg-request@ams.org, or see http://www.ams.org/amsmtgs/2025_registration.htm/ or http://www.ams.org/amsmtgs/2025_intro.htm/ and look for "Registration". VISA, MasterCard, Discover, and American Express are the only methods of payment which can be accepted for email advance registration, and charges to credit cards will be made in U.S. funds.

Completed email forms should be sent to meetreg-submit@ams.org. All advance registrants will receive acknowledgment of payment prior to the Meetings.

## INTERNET ADVANCE REGISTRATION:

This service is available for advance registration and housing arrangements at http://uww.ams.org/amsmtgs/2025_registration. html. VISA, MasterCard, Discover, and American Express are the only methods of payment which are accepted for Internet advance registration, and charges to credit cards will be made in U.S. funds. All Internet advance registrants will receive acknowledgment of payment upon submission of this form.

## CANCELLATION POLICY:

Those who cancel their advance registration for the Meetings, MAA Minicourses, or Short Courses by January 5 (the deadline for refunds for banquet tickets is December 29) will receive a $50 \%$ refund of fees paid. No refunds will be issued after this date.

## JOINT MATHEMATICS MEETINGS REGISTRATION FEES

|  | BY DEC 15 | at metting |
| :---: | :---: | :---: |
| Member of MAA, AMS, ASL, Canadian Mathematical Society ....................... | \$175 | \$228 |
| Temporarily Employed | 135 | 153 |
| Emeritus Member of MAA, AMS; Graduate Student; Unemployed; Librarian; High School Teacher; Developing Countries Special Rate $\qquad$ | 35 | 45 |
| Undergraduate Student . | 20 | 26 |
| Nonmember | 271 | 353 |
| High School Student | 2 | 5 |
| One Day Member of MAA, AMS, CMS ...................................................... | n/a | 125 |
|  | n/a | 194 |
| Nonmathematician Guest | 5 | 5 |
| Employment Center |  |  |
| Employer (first table) | \$200 | \$250 |
| Employer (each additional table) ................. | 50 | 75 |
| Applicants (all services) | 40 | 75 |
| Applicants (Winter List \& message center only) ............................ | 20 | 20 |
| Employer Posting Fee .. | 50 | N/A |
| AMS Short Course |  |  |
| Student/Unemployed/Emeritus | \$35 | 545 |
| All other participants ........................... | 80 | 95 |
| MNA Minicourses |  |  |
| Minicourses \#7-14 | \$55 | \$55* |
| Minicourses \#1-6 | 85 | $85^{\circ}$ |
| *if space is available |  |  |
| MMA Short Course |  |  |
|  | \$125 | \$140 |
| Nonmember ........................................................................................... | 175 | 190 |
| Student/Unemployed/Emeritus ................................................................ | 50 | 60 |

## FULL-TIME STUDENTS:

Those currently working toward a degree or diploma. Students are asked to determine whether their status can be described as graduate (working toward a degree beyond the bachelor's), undergraduate (working toward a bachelor's degree), or high school (working toward a high school diploma) and to mark the Advance Registration/Housing Form accordingly.

## EMERITUS:

Persons who qualify for emeritus membership in either the Society or the Association. The emeritus status refers to any person who has been a member of the MAA or AMS for twenty years or more and who retired because of age or long-term disability from his or her latest position.

## LIBRARIAN:

Any librarian who is not a professional mathematician.

## UNEMPLOYED:

Any person currently unemployed, actively seeking employment, and not a student. It is not intended to include any person who has voluntarily resigned or retired from his or her latest position.

## DEVELOPING COUNTRY PARTICIPANT:

Any person employed in developing countries where salary levels are radically noncommensurate with those in the U.S.

## TEMPORARILY EMPLOYED:

Any person currently employed but who will become unemployed by June 1,2001 , and who is actively seeking employment.

## NONMATHEMATICIAN GUEST:

Any family member or friend who is not a mathematician and who is accompanied by a participant of the Meetings. These official guests will receive a badge and may attend all sessions and the exhibits.

Participants who are not members of the MAA and/ or the AMS will receive mailings after the Meetings are over with a special membership offer from MAA and AMS.

Advance registration and on-site registration fees only partially cover the expenses of holding meetings. All mathematicians who wish to attend sessions are expected to register and should be prepared to show their badges if so requested. Badges are required to enter the exhibit area, to obtain discounts at the MAA and AMS Book Sales, and to cash a check with the Joint Meetings cashier. If a registrant should arrive too late in the day to pick up his/her badge, he/she may show the acknowledgment of advance registration received from the MMSB as proof of registration.

Advance registration forms accompanied by insufficient payment will either be returned, thereby delaying the processing of any housing request, or a $\$ 5$ charge will be assessed if an invoice must be prepared to collect the delinquent amount. Overpayments of less than \$5 will not be refunded.

For each invalid check or credit card transaction that results in an insufficient payment for registration or housing, a $\$ 5$ charge will be assessed. Participants should check with their tax preparers for applicable deductions for education expenses as they pertain to these Meetings.

If you wish to be included in a list of indlividuals sorted by mathematical interest, please provide the one mathematical subject classification number of your major area of interest on the Advance Registration/ Housing Form.
(A list of these numbers is available by sending an empty email message to abs-submit@ams.org, include the number 962 as the subject of the message.)

Copies of this list will be available for your perusal in the Networking Center.

If you do not wish to be included in any mailing list used for promotional purposes, please indicate this in the appropriate box on the Advance Registration/ Housing Form.

## Advance Registration Deadlines

There are three separate advance registration deadlines, each with its own advantages and benefits.

| EARLY advance registration <br> (room lottery, inclusion in the | November 1 |
| :--- | :--- |
| Winter Lists for the Employment Center) |  |
| ORDINARY advance registration | November 14 |
| (hotel reservations, materials mailed) |  |
| FINAL advance registration <br> (advance registration, Short Courses, <br> Employment Center, MAA Minicourses, <br> Banquets) | December 15 |

## EARIY ADVANCE REGISTRATION:

Those who register by the earty deadline of November 1 will be included in a random drawing to select winners of complimentary hotel rooms in New Orleans. Multiple occupancy is permissible. The location of rooms to be used in this lottery will be based on the number of complimentary rooms available in the various hotels. Therefore, the free room may not necessarily be in the winner's first-choice hotel. The winners will be notified by mail prior to December 25 . So register early! (See the list of the winners in Washington, D.C. on the hotel page.) Also, applicant and employer forms must be received by November 1 in order to be reproduced in the Winter Lists for the Employment Center.

## ORDINARY ADVANCE REGISTRATION:

Those who register after November 1 and by the ordinary deadline of November 14 may use the housing services offered by the MMSB but are not eligible for the room lottery. You may also elect to receive your badge and program by mail in advance of the meetings.

## FINAL ADVANCE REGISTRATION:

Those who register after November 14 and by the final deadline of December 15 must pick up their badges, programs, and any tickets for social events at the meetings. Unfortunately, it is not possible to provide final advance registrants with housing. Please note that the December 15 deadline is firm; any forms received after that date will be returned and full refunds issued. Please come to the Registration Desk in the Marriott Hotel to register on site.


## MISCELLANEOUS INFORMATION



[^1]
## Hotel Reservations

Participants should be aware that the MAA and AMS only contract with facilities who are working toward being in compliance with the pubic accommodations requirements of the ADA.

Participants requiring hotel reservations should read the instructions on the following hotel pages. Participants who did not reserve a room during advance registration and would like to obtain a room at one of the hotels listed on the following pages should call the hotels directly after December 25. However, after that date the MMSB can no longer guarantee availability of rooms or special convention rates. Participants should be aware that most hotels are starting to charge a penalty fee to guests for departure changes made after guests have checked into their rooms. Participants should inquire about this at check-in and make their final plans accordingly.

Participants should also be aware that it is general hotel practice in most cities to hold a nonguaranteed reservation until 6:00 p.m. only. When one guarantees a reservation by paying a deposit or submitting a credit card number as a guarantee in advance, however, the hotel usually will honor this reservation up until checkout time the following day. If the individual holding the reservation has not checked in by that time, the room is then released for sale, and the hotel retains the deposit or applies one night's room charge to the credit card number submitted.

If you hold a guaranteed reservation at a hotel but are informed upon arrival that there is no room for you, there are certain things you can request the hotel do. First, they should provide for a room at another hotel in town for that evening at no charge. (You already paid for the first night when you made your deposit.) They should pay for taxi fares to the other hotel that evening and back to the Meetings the following morning. They should also pay for one telephone toll call so that you can let people know you are not at the hotel you expected. They should make every effort to find a room for you in their hotel the following day and, if successful, pay your taxi fares to and from the second hotel so that you can pick up your baggage and bring it to the first hotel. Not all hotels in all cities follow this practice, so your request for these services may bring mixed results or none at all.

## Miscellaneous Information

## AUDIO-VISUAL EQUIPMENT:

Standard equipment in all session rooms is one overhead projector and screen. (lnvited 50 -minute speakers are automatically provided with two overhead projectors.) Blackboards are not available. Organizers of sessions that by their nature demand additional equipment (e.g., VCR and monitor or projection panel) and where the majority of speakers in the session require this equipment should contact the audio-visual coordinator for the meetings at the AMS office in Providence at 401-455-4140 or by email at wsd@ams.org, to obtain the necessary approvals. Individual speakers must consult with the session organizer(s) if additional equipment or services are needed. If your session has no organizer,
please contact the audio-visual coordinator directly. All requests should be received by November 4.
Equipment requests made at the Meetings most likely will not be granted because of budgetary restrictions. Unfortunately no audio-visual equipment can be provided for committee meetings or other meetings or gatherings not on the scientific program.

## CHILD CARE:

The Marriott and Sheraton hotels will provide recommendations for in-room child care for guests through their concierge desks. Call 504-581-1000 (Marriott) or 504-525-2500 (Sheraton) at least one day in advance. Arrangements represent a contractual agreement between each individual and the child care provider. The Joint Meetings assumes no responsibility for the services rendered.

## EMAIL SERVICES:

The AMS and MAA are pleased to announce that Wolfram Research, Inc., makers of Mathematica, will once again sponsor email access for all Joint Meeting participants. The hours of operation will be published in the program. The MAA and AMS thank Wolfram Research for its generosity in providing this valuable service.

> WOLFRAM RESEARCH

## INFORMATION DISTRIBUTION:

Tables are set up in the exhibit area for dissemination of general information of possible interest to the members and for the dissemination of information of a mathematical nature not promoting a product or program for sale.
If a person or group wishes to display information of a mathematical nature promoting a product or program for sale, they may do so in the exhibit area at the Joint Books, Journals, and Promotional Materials exhibit for a fee of $\$ 50$ per item. Please contact the exhibits manager, MMSB, P.O. Box 6887, Providence, RI 02940, for further details.

If a person or group would like to display material in the exhibit area separate from the Joint Books table, the proponent must reimburse the MAA and AMS for any extra furnishings requested (tables, chairs, easels, etc.) in addition to payment of the $\$ 50$ per item fee. (This latter display is also subject to space availability.)

The administration of these tables is in the hands of the MAA-AMS Joint Meetings Committee, as are all arrangements for Joint Mathematics Meetings.

## LOCAL INFORMATION:

See http://www.experienceneworleans.com/ for information about the city.

## PETITION TABLE:

At the request of the AMS Committee on Human Rights of Mathematicians, a table will be made available in the exhibit area at which petitions on behalf of named individual mathematicians suffering from human rights volations may be displayed and signed by meetings participants acting in their individual capacities. For details contact the director of meetings in the Providence office at 401-455-4137 or by email at dms@ams.org.
Signs of moderate size may be displayed at the table but must not represent that the case of the individual in question is backed by the Committee on Human Rights unless it has, in fact, so voted. Volunteers may be present at the table to provide information on individual cases, but notice must be sent at least seven days in advance of the Meetings to the director of meetings in the Providence office. Since space is limited, it may also be necessary to limit the number of volunteers present at the table at any one time. The Committee on Human Rights may delegate a person to be present at the table at any or all times, taking precedence over other volunteers.

Any material that is not a petition (e.g., advertisements, résumés) will be removed by the staff. At the end of registration on Saturday any material on the table will be discarded, so individuals placing petitions on the table should be sure to remove them prior to the close of registration.

## TELEPHONE MESSAGES:

The most convenient method for leaving a message is to do so with the participant's hotel. Another method would be to leave a message at the Meeting Registration Desk from January 10 through 13 during the hours that the desk is open. These messages will be posted on the Math Meetings Message Board; however, staff at the desk will try to locate a participant in the event of a bona fide emergency. The telephone number will be published in the program.

## Travel

The closest airport to the meetings is the New Orleans International Airport located in Kenner, about 15 miles from the New Orleans central business district.

## US AIRWAYS

has been selected as the official airline for these meetings because of its generally convenient schedules to New Orleans, LA. Given the volatility in airfares because of "fare wars," we cannot guarantee that these will be the lowest fares when you make your arrangements.

However, we strongly urge participants to make use of this special deal if at all possible, since the MAA and AMS can earn complimentary tickets on US Airways. These tickets are used to send meetings' staff (not officers or other staff) to the Joint Mathematics Meetings, thereby keeping the costs of the meetings (and registration fees) down.
The following specially negotiated rates are available only for these meetings and exclusively to mathematicians and their families for the period January 7-16, 2001.
Other restrictions/discounts may apply and seats are limited.
m 5\% discount off First or Envoy Class and any published US Airways promotional round-trip fare. By purchasing your ticket 60 days or more prior to departure, you can receive an additional $5 \%$ bonus discount.

- 10\% discount off unrestricted coach fares with seven-day advance purchase. By purchasing your ticket 60 days or more prior to departure, you can receive an additional $5 \%$ bonus discount.
For reservations call (or have your travel agent call) US Airways Group and Meeting Reservation Office toll-free at 877-874-7687 between 8:00 AM and 9:30 PM Eastern Time. Refer to Gold File number 88111579.


## FROM THE AIRPORTS TO DOWNTOWN:

The Louisiana Transit Company (504-592-0555) operates a shuttle service from the airport to several hotels (including the Marriott and Sheraton) every 15 minutes until the last flight of the night. The fare is $\$ 10$ each way.

Rates for taxi service are about $\$ 21$ for one or two passengers, $\$ 24$ for three, $\$ 32$ for four, or $\$ 40$ for five.

The fare for the public bus to the downtown area is $\$ 1.10$. Call 504-737-9611 for more information.

## DRIVING DIRECTIONS:

Go east on the Airline Highway toward the airport exit by turning right. Turn right onto Hickory Ave. straight onto Dickory Ave. Turn left onto Earhart Expressway, which turns into Earhart Blvd. Turn right onto S. Carrollton Ave., then take the $\mathrm{l}-10 \mathrm{ramp}$ toward Baton Roge/Slidell. Merge onto I-10 E. Take exit \#234B on the left toward Poydras St/Superdome. Turm left on to S. Claiborne Ave., then turn right onto Poydras St. Turn left onto Tchoupitoulas St, then left again onto Canal St.

## RAILWAY TRANSPORTATION:

For information on AMTRAK call 800-872-7245.

## BY BUS:

Greyhound, 800-231-2222.

## WEATHER:

January weather in New Orleans is generally mild. Average daily maximum and minimum temperatures are $62^{\circ} \mathrm{F}$ and $43^{\circ}$. Average precipitation is about 5.1 inches.
For more current information use your favorite net search engine or try the sites: $h$ htp:// uww.usatoday.com/weather/basemaps/nw722310.htm or http://uww.weather.com/weather/us/zips/0130.html.


# Two New Geometry Titles 



Catalog Code: PWU2/JR 142 pp., Paperbound, 2000 ISBn 088385-721-9 List: \$24.00 maf Member: $\mathbf{\$ 1 8 . 9 5}$


Catalog Code: MIE-53/JR
217 pp., Paperbound, 2000
ISBП 088385-164-4
List: \$25.95
minh Member: $\mathbf{\$ 1 9 . 5 0}$

Proofs Without Words II<br>More Exercises In Visual Thinking' Roger B. Nelsen

What are "proofs without words?" Many would argue that they are not really "proofs" (nor, for that matter, are many "without words," on account of equations which often accompany them). Like its predecessor Proofs without Words, published by the MAA in 1993, this book is a collection of pictures or diagrams that help the reader see why a particular mathematical statement may be true, and also to see how one might begin to go about proving it true. The emphasis is on providing visual clues to the observer to stimulate mathematical thought.

Proofs without words have been around for a long time. In this volume you find modern renditions of proofs without words from ancient China, tenth century Arabia, and Renaissance Italy. While the majority of the proofs without words in this book originally appeared in journals published by the MAA, others first appeared in journals published by other organizations in the US and abroad, and on the World Wide Web.

The proofs in this collection are arranged by topic into five chapters. Although the proofs without words are presented primarily for the enjoyment of the reader, teachers will want to use them with students at many levels---in precalculus courses in high school, in college courses in calculus, number theory and combinatorics, and in pre-service and in-service classes for teachers.

## Geometry At Work Catherine A. Gorini, editor

While there are many textbooks presenting a pure or theoretical approach to geometry and many monographs investigating a single aspect of applied geometry, it is difficult to find a wide-angle view of applied geometry. The purpose of this collection is to give as broad a picture as possible of the applications of geometry. At the same time, since the papers in this collection have been written by pioneers and leading experts in each of the fields represented, the reader is assured of seeing the creativity, depth, and rigor that is an essential part of any successful application of mathematical knowledge.

This collection will be a rich resource for the geometry instructor, whether as a supplement to standard textbook material, reference material for student reports and projects, or as the starting point for a research program. The papers vary in difficulty, but are accessible to anyone having a college-level acquaintance with geometry. It is hoped that this volume will open many new worlds for all lovers of geometry.

Contents: 1. Art and Architecture. Spirals and the Rosette in Architectural Ornament; Sun, Disk, Moon Disk; Façade Measurement by Trigonometry; A Secret of Ancient Geometry. 2: Vedic Civilization. Square Roots in the Súlba Sultras: Applied Geometry in the Súlba Sultras. 3. The Classroom. Ethnomathematics for the Geometry Curriculum; Education with Fascination: Teaching Descriptive Geometry with Applications. 4. Engineering. Making Measurements on Curved Surfaces; Mathematics to the Aid of Surgeons; The Geometry of Frameworks: Rigidity, Mechanisms and CAD; Geometry and Geographical Information Systems; On the Other Hand: Geometric Ideas in Robotics. Decision Making Processes. Decisions through Triangles; Geometry in Learning. 6. Mathematics and Science. The Geometry of Numbers; Statistical Symmetry; Three-Dimensional Topology and Quantum Physics; Bridges between Geometry and Graph Theory; Polytopes in Combinatorial Optimization.

New Orleans Joint Meeting Advance Registration/Housing Form

| Name | (please write name as you would like it to appear on your badge) |
| :---: | :---: |
| Mailing Address |  |
| Telephone | Fax |
| Email Address |  |
|  | (Acknowledgment of this registration will be sent to the email address given here, unless you check this box: Send by US Mail $\square$ ) |
| Badge Information: | Affiliation for badge ___ |
|  | Nonmathematician guest badge name ___ (please note charge below) |


| Joint Meetings | by Dec 15 | at mtg | Subtotal |
| :---: | :---: | :---: | :---: |
| $\square$ Member AMS, ASL, CMS, MAA | \$175 | \$228 |  |
| $\square$ Nonmember | \$271 | \$353 |  |
| $\square$ Graduate Student | \$ 35 | \$ 45 |  |
| $\square$ Undergraduate Student | \$ 20 | \$ 26 |  |
| $\square$ High School Student | \$ 2 | \$ 5 |  |
| $\square$ Unemployed | \$ 35 | \$ 45 |  |
| $\square$ Temporarily Employed | \$135 | \$153 |  |
| $\square$ Developing Countries Special Rate | \$ 35 | \$ 45 |  |
| $\square$ Emeritus Member of AMS or MAA | \$ 35 | \$ 45 |  |
| $\square$ High School Teacher | \$ 35 | \$ 45 |  |
| $\square$ Librarian | \$ 35 | \$ 45 |  |
| $\square$ Nonmathematician Guest | \$ 5 | \$ 5 |  |
|  |  | \$ | \$ |

## Payment



I DO NOT want my program and badge to be mailed to me on 12/15/00.

AMS Short Course: Mathematical Blology (1/8-1/9)

| $\square$ Member, Nonmember | $\$ 80$ | $\$ 95$ |
| :--- | :--- | :--- |
| $\square$ Student, Unemployed, Emeritus | $\$ 35$ | $\$ 45$ |

$\begin{array}{lll}\text { MAA Short Course: Knots in Sclence (1/8-1/9) } & \\ \square \text { Member of MAA } & \$ 125 & \$ 140 \\ \square \text { Nonmember } & \$ 175 & \$ 190\end{array}$
$\square$ Student, Unemployed, Emeritus \$50 \$ 60

MAA Minicourses (see listing in text)
I would like to attend: $\square$ One Minicourse a Two Minicourses Please enroll me in MAA Minicourse(s)
In order of preference, my alternatives are: \# $\qquad$ and/or \# $\qquad$
$\qquad$
$\qquad$

Prices: \$85 for Minicourses \#1-6 and \$55 for Minicourses \#7-14

## Employment Center

Applicant résumé forms and employer job listing forms will be on e-MATH and in Notices in September and October.

| Employer—First Table <br> $\square$ Regular $\square$ Self-scheduled | $\$ 200$ | $\$ 250$ |
| :--- | :--- | :---: |
| Employer-Second Table <br> $\square$ Regular $\square$ Self-scheduled | $\$ 50$ | $\$ 75$ |
| $\square$ Employer—Posting Only |  |  |$\quad \$ 50$| N/A |
| :--- |
| $\square$ Applicant (all services) |
| $\square$ Applicant (Winter List \& Message Ctr only) |

$\qquad$

## Total Amount To Be Paid

$\$$ $\qquad$
(Note: A $\$ 5$ processing fee will be charged for each returned check or invalid credit card.)

## Method of Payment

- Check. Make checks payable to the AMS. Checks drawn on foreign banks must be in equivalent foreign currency at current exchange rates.
$\square$ Credit Card. VISA, MasterCard, AMEX, Discover (no others accepted).
Card number:
Exp. date: $\qquad$
Signature:
Name on card
$\square$ Purchase order \#
(please enclose copy)
Registration for the Joint Meetings is not required for the Short Courses, but it is required for the Minicourses and the Employment Center.


## Other Information

Mathematical Reviews field of interest \#
How did you hear about this meeting? Check one: $\square$ Colleague(s) $\square$ Focus

$$
\square \text { Notices } \square \text { Focus } \square \text { Special Promo Piece } \square \text { WWW }
$$

$\square$ I am a mathematics department chair.
$\square$ Please do not include my name on any promotional mailing list.
$\square$ Please $\checkmark$ this box if you have a disability requiring special services.


## Mail to:

## Mathematics Meetings Service Bureau (MMSB)

## P. O. Box 6887

## Providence, RI 02940-6887

Fax: 401-455-4004
Questions/changes call: 401-455-4143 or 1-800-321-4267 $\times 4143$; mmsb@ams.org

## Deadlines

For room lottery and/or resumés/job descriptions printed in the Winter Lists, return this form by:

Nov. 1, 2000
For housing reservations, badges/programs mailed: Nov. 14, $\mathbf{2 0 0 0}$
For housing changes/cancellations through MMSB: Dec. 13, 2000
For advance registration for the Joint Meetings, Employment Center, Short Courses, MAA Minicourses, \& Tickets: Dec. 15, $\mathbf{2 0 0 0}$
For $50 \%$ refund on banquets, cancel by: Dec. 29, 2000*
For 50\% refund on advance registration, Minicourses \&
Short Courses, cancel by:
Jan. 5, 2001*
Hotel Reservations


 tax is included in the rates listed below. Guarantee requirements: First night deposit by check (add to payment on reverse of form) or a credit card guarantee. $\square$ Deposit enclosed $\quad \square$ Hold with my credit card Card Number

## Date and Time of Arrival

Name of Other Room Occupant

> Date and Time of Departure
Child ___(give age)

| Order of choice | Hotel | Single | Double 1 bed | Double <br> 2 beds | Triple 2 beds | Triple 2 beds w/cot | Quad <br> 2 beds | Quad <br> 2 beds w/cot | Suites Starting rates |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | New Orleans Marriott (Co-headquarters) |  |  |  |  |  |  |  |  |
|  | Regular | \$116 | \$121 | \$121 | \$121 | \$121 (King-bedded room only) | \$121 | N/A | \$603 |
|  | Student | \$108 | \$108 | \$108 | \$108 | N/A | \$108 | N/A | N/A |
|  | Sheraton New Orleans (Co-headquarters) |  |  |  |  |  |  |  |  |
|  | Club Level | \$157 | \$169 | \$169 | \$194 | \$194 (King-bedded room only) | \$219 | N/A | \$598 |
|  | Main House | \$116 | \$124 | \$124 | \$124 | $\$ 124$ (King-bedded room only) | \$124 | N/A | \$278 |
|  | Student | \$110 | \$110 | \$110 | \$110 | N/A | N/A | N/A | N/A |
|  | Le Meridien |  |  |  |  |  |  |  |  |
|  | Deluxe | \$137 | \$137 | \$137 | \$167 | \$197 (limited) | N/A | N/A | N/A |
|  | Superior | \$117 | \$117 | \$117 | \$137 | \$167 (limited) | N/A | N/A | N/A |
|  | Queen \& Crescent |  |  |  |  |  |  |  |  |
|  | Regular | \$106 | \$106 | \$106 | \$116 | N/A | \$126 | N/A | N/A |
|  | Student (limited amount) | \$96 | \$96 | \$96 | N/A | N/A | N/A | N/A | N/A |
|  | Royal St. Charles |  |  |  |  |  |  |  |  |
|  | Regular | \$106 | \$106 | \$106 | \$116 | N/A | \$126 | N/A | N/A |
|  | Student (limited amount) | \$96 | \$96 | \$96 | N/A | N/A | N/A | N/A | N/A |
|  | La Quinta Inn \& Suites | \$100 | \$110 | \$110 | \$130 | \$130 | \$140 | \$140 | N/A |

$\square$ I plan to make a reservation at a later date
$\square$ I will be making my own reservations at a hotel not listed. Name of hotel:
$\square$ I live in the area or will be staying privately with family or friends.
$\square$ I plan to share a room with

JANUARY 8, 2001

| 9:00 AM-5:00 PM | AMS Short Course on <br> Mathematical Biology |
| :--- | :--- |
| 9:00 AM-5:00 PM | MAA Short Course on <br> Knots in Science |

TUESDAY
JANUARY 9, 2001

| 8:30 AM-4:00 PM | MAA Board of Governors |
| :--- | :--- |
| 9:00 AM-5:00 PM | AMS Short Course on |
|  | Mathematical Biology |
| 9:00 AM-5:00 PM | MAA Short Course on |
|  | Knots in Science |
| 1:00 PM-10:00 PM | AMS Council |
| 3:00 PM-7:00 PM | Joint Meetings Registration |

## WEDNESDAY JANUARY 10, 2001

| 7:30 AM-4:00 PM | Joint Meetings Registration |
| :---: | :---: |
| 7:30 AM-6:00 PM | Employment Center Registration, orientation, and interview center (see article for specific hours). |
| 8:00 AM-11:00 AM | MAA-AMS-MER Special Session on Mathematics and Education Reform, I |
| 8:00 AM-11:00 AM | AMS Special Session on Discovery Learning: The Moore Method in American Mathematics |
| 8:00 AM-11:00 AM | AMS Special Session on Integrals and Series throughout Mathematics, I |
| 8:00 AM-11:00 AM | AMS Special Session on Asymptotic Behavior of Difference Equations with Applications, I |
| 8:00 AM-11:00 AM | AMS Special Session on Commutative Rings and Monoids, I |
| 8:00 AM-11:00 AM | AMS Special Session on Function Theory, Differential Equations and Functional Equations, I |
| 8:00 AM-11:00 AM | AMS Special Session on Braid Groups and Configuration Spaces, I |
| 8:00 AM-11:00 AM | AMS Special Session on Operator Theory on Function Spaces, I |
| 8:00 AM-11:00 AM | AMS Special Session on Graduate and Postdoctoral Education in Arithmetical Algebraic Geometry: The Arizona Winter School, I |
| 8:00 AM-11:00 AM | AMS Special Session on Nonlinear Evolution Equations and Applications, I |
| 8:00 AM-10:00 AM | MAA Minicourse |
| #12: Part A Contemporary college algebra: A reform program |  |
| 8:00 AM-10:00 AM | MAA Minicourse |
| #1: Part A Creating materials using 'real-word' data |  |

8:00 AM-10:00 AM MAA Minicourse <br>\#7: Part A Cwatsets: A research experience for undergraduates
8:00 AM-10:55 AM MAA Session on Great Theorems of Mathematics, I
8:00 AM-10:55 AM MAA Session on Chaotic Systems and Fractal Geometry, I
8:00 AM-10:55 AM MAA Session on Redefining What a Modern "College Algebra" Experience Means, I

8:00 AM-10:55 AM MAA Session on Courses and Programs That Illustrate Recommendations of the Mathematical Education of Teachers Document, I
8:00 AM-10:55 AM MAA Session on ARUME, I
8:00 AM-10:50 AM AMS Special Session on Geometric Group Theory, I
8:00 AM-10:50 AM AMS Sessions for Contributed Papers

9:00 AM-10:30 AM MAA Panel Discussion The muse of history: Writing biographies of mathematicians
9:00 AM-10:30 AM MAA Panel Discussion CBMS report on the mathematical education of teachers

9:00 AM-10:30 AM MAA Committee on Computers in Mathematics Education Panel Discussion On line assessment

| 10:05 AM-10:55 AM | AMS Invited Address Michael J. Hopkins Titte to be announced |
| :---: | :---: |
| 11:10 AM-12:00 PM | MAA-AMS Invited Address Jeffrey R. Weeks Measuring the universe |
| 12:00 PM-5:30 PM | Book Sales and Exhibits |
| 1:00 PM-2:00 PM | AMS Colloquium Lecture: Lecture I |

## 2001

JOINT
MATMEMATICS
MEETINES
NEW ORLEANS MARRIOTT AND SHERATON HOTELS NEW ORLEANS, LOUISIANA JANUARY 10-13, 2001

| 2:15 PM-6:00 PM | AMS Special Session on Braid Groups and Configuration Spaces, II |
| :---: | :---: |
| 2:15 PM-6:00 PM | AMS Special Session on Operator Theory on Function Spaces, II |
| 2:15 PM-6:00 PM | AMS Special Session on PDE Models in Population Biology and Epidemiology, I |
| 2:15 PM-6:00 PM | AMS Special Session on Graduate and Postdoctoral Education in Arithmetical Algebraic Geometry: The Arizona Winter School, II |
| 2:15 PM-4:15 PM | MAA Minicourse <br> #13: Part A <br> Getting students involved in undergraduate research |
| 2:15 PM-4:15 PM | MAA Minicourse <br> #2: Part A <br> WeBWork an Internet-based system for generating and delivering homework problems to students |
| 2:15 PM-4:15 PM | MAA Minicourse <br> #8: Part A <br> Teaching graduate students how to teach using case studies |
| 2:15 PM-5:15 PM | MAA Session on Innovative Uses of the World Wide Web in Teaching Mathematics, I |
| 2:15 PM-5:15 PM | MAA Session on Serving the Needs of Developmental Students: Who Are They, Where Do They Come From, Where Do They Go?, I |
| 2:15 PM-4:15 PM | MAA Session on The Undergraduate Seminar in Mathematics |
| 2:15 PM-5:15 PM | MAA Session on Topics in Teaching, Learning, and Exploring Proof |
| 2:15 PM-4:15 PM | MAA Session on General Contributed Paper Session, I |
| 2:15 PM-3:45 PM | MAA Committee on Minority Participation in Mathematics Panel Discussion Increasing minority representation in mathematics through GAANN |
| 2:15 PM-3:45 PM | MAA Joint Committee Panel Discussion Redefining "college algebra" courses |
| 2:15 PM-5:55 PM | AMS Sessions for Contributed Papers |
| 2:45 PM-4:05 PM | AWM Panel Discussion AWM and K-8 education: What should we do? |
| 3:20 PM-4:10 PM | MAA Invited Address Hyman Bass and Deborah Ball Titte to be announced |
| 4:00 PM-5:30 PM | MAA-Young Mathematicians Network Panel Discussion YMN project on keeping active in research |
| 4:00 PM-6:00 PM | Joint Committee on Employment Opportunities <br> Panel Discussion <br> The job market |
| 4:00 PM-6:00 PM | MAA Special Presentation The British Open University: 30 years on. |
| 4:05 PM-4:25 PM | AWM Business Meeting |
| 4:30 PM-6:30 PM | MAA Minicourse |
| #6: Part A Computation and discovery in the number theory classroom. |  |
| 4:30 PM-6:00 PM | AMS Committee on the Profession Panel Discussion |
| 4:30 PM-6:30 PM | MAA Section Officers |
| 5:00 PM-6:30 PM | Reception for Graduate Students |
| 5:15 PM-7:15 PM | MAA-GAANN Poster Session Sharing of results by future mathematicians from under-represented areas |
| 5:30 PM-7:30 PM | Mathematical Sciences Institutes Reception |
| 6:00 PM-7:00 PM | Reception for First-Time Participants |


| 6:30 PM-8:00 PM | MAA Special Presentation <br> Eine Keine (Mathematische) Nachtmusik |
| :--- | :--- |
| 7:15 PM-8:15 PM | Young Mathematicians Network Discussion <br> Concerns of young mathematicians: A town meeting |
| 8:30 PM-9:30 PM | AMS Josiah Willard Gibbs Lecture <br> Ronald L. Graham <br> Title to be announced |
| 9:30 PM-11:00 PM | AWM Reception |

## THURSDAY <br> JANUARY 11, 2001

7:00 AM-7:30 PM Employment Center Distribution of schedules, scheduled interviews, and interview center (see article for specific hours)
7:30 AM-4:00 PM Joint Meetings Registration
8:00 AM-12:00 PM MAA-AMS-MER Special Session on Mathematics and Education Reform, III
8:00 AM-12:00 PM AMS Special Session on Geometric Group Theory, III
8:00 AM-12:00 PM AMS Special Session on Model Theory, I
8:00 AM-12:00 PM AMS Special Session on Representation Theory of Finite and Algebraic Groups, II
8:00 AM-12:00 PM AMS Special Session on Integrals and Series throughout Mathematics, III
8:00 AM-12:00 PM AMS Special Session on Asymptotic Behavior of Difference Equations with Applications, III
8:00 AM-12:00 PM AMS Special Session on Function Theory, Differential Equations and Functional Equations, II
8:00 AM-12:00 PM AMS Special Session on Operator Theory on Function Spaces, III
8:00 AM-12:00 PM AMS Special Session on PDE Models in Population Biology and Epidemiology, II
8:00 AM-12:00 PM AMS Special Session on Nonlinear Evolution Equations and Applications, II
8:00 AM-10:00 AM MAA Minicourse <br>\#4: Part A The Global Classroom: Using the Web as an interactive leaming environment
8:00 AM-10:00 AM MAA Minicourse <br>\#7: Part B Cwatsets: A research experience for undergraduates
8:00 AM-10:00 AM MAA Minicourse <br>\#9: Part A Making liberal arts mathematics the most important course students take to learn effective thinking
8:00 AM-12:00 PM MAA Session on Great Theorems of Mathematics, II

8:00 AM-12:00 PM MAA Session on Chaotic Systems and Fractal Geometry, II
8:00 AM-12:00 PM MAA Session on Redefining What a Modern "College Algebra" Experience Means, II

8:00 AM-12:00 PM MAA Session on Courses and Programs That llustrate Recommendations of the Mathematical Education of Teachers Document. II
8:00 AM-12:00 PM MAA Session on ARUME, II
8:00 AM-10:55 AM AMS Sessions for Contributed Papers
9:00 AM-9:50 AM AWM Emmy Noether Lecture Sun-Yung Alice Chang
Nonlinear equations in conformal geometry

| 9:00 AM-10:30 AM | MAA Joint Committee <br> Panel Discussion <br> Faculty isolated by discipline |
| :---: | :---: |
| 9:00 AM-11:00 AM | MAA Subcommittee on Quantitative Literacy Poster Session College and university quantitative literacy programs across the nation |
| 9:00 AM-10:30 AM | MAA Panel Discussion Doctoral programs in mathematics education |
| 9:00 AM-10:30 AM | MAA Project NExT Panel Discussion How to attract more students into advanced mathematics classes |
| 9:30 AM-5:30 PM | Book Sales and Exhibits |
| 10:05 AM-10:55 AM | MAA Invited Address Peter D. Lax Titte to be announced |
| 10:15 AM-12:15 PM | MAA Minicourse |
| #3: Part A Teaching contemporary statistics with active leaming |  |
| 10:45 AM-12:15 PM | MAA Committee on the Teaching of Undergraduate Mathematics Panel Discussion Growing an oak tree from an acom: Extending a new program from a few innovators to the whole department |
| 10:45 AM-12:15 AM | MAA Panel Discussion Beyond the writing of principles and standards for school mathematics |
| 10:45 AM-12:15 PM | MAA Panel Discussion Funding opportunities in the NSF Division of Undergraduate Education |
| 1:00 PM-2:00 PM | AMS Colloquium Lectures: Lecture II János Kollár Tite to be announced |
| 1:00 PM-4:10 PM | MAA-AMS-MER Special Session on Mathematics and Education Reform, IV |
| 1:00 PM-4:10 PM | AMS Special Session on Geometric Group Theory, IV |
| 1:00 PM-4:10 PM | AMS Special Session on Model Theory, II |
| 1:00 PM-4:10 PM | AMS Special Session on Representation Theory of Finite and Algebraic Groups, III |
| 1:00 PM-4:10 PM | AMS Special Session on Commutative Rings and Monoids, III |
| 1:00 PM-4:10 PM | AMS Special Session on Function Theory, Differential Equations and Functional Equations, III |
| 1:00 PM-4:10 PM | AMS Special Session on Braid Groups and Configuration Spaces, III |
| 1:00 PM-4:10 PM | AMS Special Session on PDE Models in Population Biology and Epidemiology, III |
| 1:00 PM-4:10 PM | AMS Special Session on Graduate and Postdoctoral Education in Arithmetical Algebraic Geometry: The Arizona Winter School, III |


| 1:00 PM-4:10 PM | AMS Special Session on Nonlinear Evolution Equations and Applications, III |
| :---: | :---: |
| 1:00 PM-3:00 PM | MAA Minicourse |
| #11: Part A The mathematics of decision making |  |
| 1:00 PM-3:00 PM | MAA Minicourse |
| #14: Part A Discrete dynamical systems, mathematics, methods, and models |  |
| 1:00 PM-3:00 PM | MAA Minicourse |
| #5: Part A Creating and exporting computer animations to the Web |  |
| 1:00 PM-4:00 PM | MAA Session on Innovative Uses of the World Wide Web in Teaching Mathematics, II |
| 1:00 PM-4:00 PM | MAA Session on Serving the Needs of Developmental Students: Who Are They, Where Do They Come From, Where Do They Go?, II |
| 1:00 PM-4:00 PM | MAA Session on Mathematics in the Age of Euler |
| 1:00 PM-4:00 PM | MAA Session on General Contributed Paper Session, II |
| 1:00 PM-2:30 PM | MAA Panel Discussion Curriculum Foundations Project l: Reports from the client discipline workshops |
| 1:00 PM-2:30 PM | MAA Committee on Industriai and Government Mathematicians Panel Discussion Mathematics in industry |
| 1:00 PM-2:30 PM | MAA Panel Discussion How to facilitate change? |
| 1:00 PM-4:10 PM | AMS Sessions for Contributed Papers |
| 2:00 PM-4:00 PM | Project NExT-Young Mathematicians Network Poster Session |
| 2:15 PM-3:05 PM | AMS Invited Address Bonnie Berger Titte to be announced |
| 2:45 PM-4:15 PM | MAA Panel Discussion Statistics and mathematical modeling: Lively applications for the classroom |
| 2:45 PM-4:15 PM | MAA Panel Discussion New directions in Moore method teaching |
| 2:45 PM-4:15 PM | MAA-AMS Joint Panel Discussion The NSF national science, mathematics, engineering, and technology education library program: A report on current activities and projects |
| 3:20 PM-4:10 PM | AMS Invited Address <br> Mark L. Green <br> New perspectives on algebraic cycles |
| 4:25 PM-7:00 PM | Joint Prize Session and Reception |
| 5:45 PM-7:00 PM | MAA Two-Year College Reception |
| 6:00 PM-9:30 PM | MER Banquet |
| 7:00 PM-8:15 PM | MAA Special Presentation The mathematics of Lewis Carroll |

SCHEDULE OF EVENTS


FRIDAY
JANUARY 12, 2001

| 7:00 AM-8:00 AM | Joint Pi Mu Epsilon and MAA Student Chapter Advisors' Breakfast |
| :---: | :---: |
| 7:30 AM-4:00 PM | Joint Meetings Registration |
| 8:00 AM-11:00 AM | MAA-AMS Special Session on History of Mathematics, I |
| 8:00 AM-11:00 AM | AMS Special Session on Computational Algebraic Geometry for Curves and Surfaces, I |
| 8:00 AM-10:50 AM | AMS Special Session on Applications of Mathematics to Human Physiology and Medicine, I |
| 8:00 AM-11:00 AM | AMS Special Session on Group Cohomology and Applications to Homotopy Theory and Representation Theory, I |
| 8:00 AM-11:00 AM | AMS Special Session on Geometry and Topology of Low Dimensional Manifolds, I |
| 8:00 AM-11:00 AM | AMS Special Session on Analysis on Infinite Dimensional Spaces (in honor of Leonard Gross), I |
| 8:00 AM-11:00 AM | AMS Special Session on Analytic Number Theory, I |
| 8:00 AM-11:00 AM | AMS Special Session on Stochastic Analysis and Applications, |
| 8:00 AM-11:00 AM | AMS Special Session on Integral Transforms, I |
| 8:00 AM-11:00 AM | AMS Special Session on Interaction of Inverse Problems and Image Analysis, I |
| 8:00 AM-10:00 AM | MAA Minicourse |
| #10: Part A Developing your department's assessment plan |  |
| 8:00 AM-10:00 AM | MAA Minicourse |
| #12: Part B Contemporary college algebra: A reform program |  |
| 8:00 AM-10:00 AM | MAA Minicourse |
| #1: Part B Creating materials using 'real-world' data |  |
| 8:00 AM-10:55 AM | MAA Session on Innovative Practices in Statistics Education, I |
| 8:00 AM-10:55 AM | MAA Session on Integrating Mathematics and Other Disciplines, I |
| 8:00 AM-10:55 AM | MAA Session on Computer Algebra Systems in Upper-division Mathematics Courses |
| 8:00 AM-10:55 AM | MAA Session on Classroom Demonstrations and Course ProjectsThat Make a Difference |


| 8:00 AM-10:55 AM | MAA Session on Outreach Programs for Women and Girls |
| :---: | :---: |
| 8:00 AM-10:55 AM | AMS Sessions for Contributed Papers |
| 8:00 AM-11:00 AM | PME Council |
| 8:00 AM-7:30 PM | Employment Center Scheduled intenviews and interview center (see article for specific hours) |
| 9:00 AM-9:50 AM | AMS Invited Address <br> Igor B. Frenkel <br> Titte to be announced |
| 9:00 AM-10:30 AM | MAA Panel Discussion Curriculum Foundations Project II: Implications for the mathematics community |
| 9:00 AM-10:30 AM | MAA Special Workshop Proposal witing for NSF projects in the Division of Undergraduate Education |
| 9:00 AM-11:00 AM | MAA Poster Session College algebra reform |
| 9:00 AM-10:30 AM | MAA-AMS Joint Panel Discussion Teaching math and the World Wide Web |
| 9:00 AM-5:00 PM | Association for Symbolic Logic Invited Addresses and Contributed Papers |
| 9:30 AM-5:30 PM | Book Sales and Exhibits |
| 10:05 AM-10:55 AM | AMS Invited Address Martin R. Bridson Titte to be announced |
| 11:10 AM-12:00 PM | MAA-AMS Invited Address Barry Mazur Deformations, perturbations and near-misses in geometry, physics, and number theory |
| 1:00 PM-2:00 PM | AMS Colloquium Lectures: Lecture III János Kollár Title to be announced |
| 1:00 PM-6:00 PM | MAA-AMS Special Session on History of Mathematics, II |
| 1:00 PM-6:00 PM | AMS Special Session on Computational Algebraic Geometry for Curves and Surfaces, II |
| 1:00 PM-5:00 PM | AMS Special Session on Applications of Mathematics to Human Physiology and Medicine, II |
| 1:00 PM-6:00 PM | AMS Special Session on Group Cohomology and Applications to Homotopy Theory and Representation Theory, II |
| 1:00 PM-6:00 PM | AMS Special Session on Geometry and Topology of Low Dimensional Manifolds, il |
| 1:00 PM-6:00 PM | AMS Special Session on Analytic Number Theory, II |
| 1:00 PM-6:00 PM | AMS Special Session on Partial Differential Equations and Geometric Implications, I |
| 1:00 PM-6:00 PM | AMS Special Session on Stochastic Analysis and Applications, II |


| 1:00 PM-6:00 PM | AMS Special Session on Integral Transforms, II |
| :---: | :---: |
| 1:00 PM-6:00 PM | AMS Special Session on Discrete Geometry, 1 |
| 1:00 PM-6:00 PM | AMS Special Session on Interaction of Inverse Problems and Image Analysis, II |
| 1:00 PM-3:00 PM | MAA Minicourse |
| #13: Part B Getting students involved in undergraduate research |  |
| 1:00 PM-3:00 PM | MAA Minicourse |
| #2: Part B WeBWork, an Internet-based system for generating and delivering homework problems to students |  |
| 1:00 PM-3:00 PM | MAA Minicourse |
| #8: Part B Teaching graduate students how to teach using case studies |  |
| 1:00 PM-2:30 PM | MAA Special Presentation LiveMath Maker - The future of mathematics on the Internet |
| 1:00 PM-2:30 PM | MAA Panel Discussion Assimilation of adjunct faculty |
| 1:00 PM-2:30 PM | MAA Panel Discussion Research in Undergraduate Mathematics Education (RUME): Field of stucy or a figment of our imagination? |
| 1:00 PM-3:00 PM | MAA Poster Session NSF Division of Undergraduate Education Projects in the Course (curriculum and laboratory improvement program) |
| 1:00 PM-3:20 PM | MAA Special Presentation Mathematical experiences for students outside the classroom |
| 1:00 PM-2:30 PM | MAA Panel Discussion Evolving interdisciplinary core curriculum |
| 1:00 PM-2:30 PM | SUMMA Panel Discussion |
| 1:00 PM-2:30 PM | MAA Panel Discussion <br> A report on the ASA Undergraduate Statistics Education Initiative (USED) and curriculum guidelines |
| 1:00 PM-5:55 PM | AMS Sessions for Contributed Papers |
| 2:15 PM-3:05 PM | MAA Invited Address <br> Robert F. Almgren <br> Financial derivatives and PDEs |
| 2:15 PM-5:00 PM | NAM Granville-Brown Session of Presentations by Recent Doctoral Recipients in the Mathematical Sciences |
| 2:15 PM-4:10 PM | RMMC Board of Directors |
| 2:30 PM-4:00 PM | AMS Committee on Science Policy Panel Discussion |
| 3:15 PM-5:15 PM | MAA Minicourse |
| #6: Part B Computation and discovery in the number theory classroom |  |
| 3:30 PM-4:40 PM | Blumenthal session |
| 3:30 PM-5:00 PM | MAA Presentations by Teaching Award Recipients |


| 4:20 PM-5:10 PM | AMS Committee on Science Policy Government Speaker |
| :---: | :---: |
| 5:00 PM-7:00 PM | MAA Informal Session on Actuarial Education |
| 5:00 PM-7:00 PM | Association for Research on Undergraduate Mathematics Education SIGMAA Business Meeting and Reception |
| 5:00 PM-7:00 PM | MAA-Young Mathematicians Network Panel Discussion Balancing career and family |
| 5:00 PM-7:30 PM | MAA Undergraduate Student Poster Session |
| 5:00 PM-7:00 PM | Purdue University Department of Mathematics Reception |
| 5:30 PM-8:00 PM | NAM Reception, Banquet, and Cox-Talbot Address |
| 6:30 PM-8:00 PM | MAA Special Presentation Environmental mathematics |
| 7:00 PM-9:00 PM | SIGMAA on Statistics Education Business Meeting and Reception |
| 7:30 PM-8:20 PM | MAA Student Lecture Ralph Keeney Building and using mathematical models to guide decision making |
| SMTMR |  |
| AND | 13,2001 |
| 7:30 AM-2:00 PM | Joint Meetings Registration |
| 8:00 AM-11:00 AM | MAA-AMS Special Session on History of Mathematics, III |
| 8:00 AM-11:00 AM | AMS Special Session on Computational Algebraic Geometry for Curves and Surfaces, III |
| 8:00 AM-10:50 AM | AMS Special Session on Applications of Mathematics to Human Physiology and Medicine, III |
| 8:00 AM-11:00 AM | AMS Special Session on Group Cohomology and Applications to Homotopy Theory and Representation Theory, III |
| 8:00 AM-11:00 AM | AMS Special Session on Geometry and Topology of Low Dimensional Manifolds, III |
| 8:00 AM-11:00 AM | AMS Special Session on Analysis on Infinite Dimensional Spaces (in honor of Leonard Gross), II |
| 8:00 AM-11:00 AM | AMS Special Session on Analytic Number Theory, III |
| 8:00 AM-11:00 AM | AMS Special Session on Partial Differential Equations and Geometric Implications, II |
| 8:00 AM-11:00 AM | AMS Special Session on Integral Transforms, III |
| 8:00 AM-11:00 AM | AMS Special Session on Discrete Geometry, II |
| 8:00 AM-10:00 AM | MAA Minicourse |
| #10: Part B Developing your department's assessment plan |  |

SCHEDULE OF EVENTS COMTIMUED


SCHEDULE OF EVENTS


2001
JOINT
MATHEMATICS
MEETINGS
NEW ORLEANS marriott and Sheraton hotels NEW ORLEANS, louisiana JANUARY 10-13, 2001
$\begin{array}{ll}\text { 8:00 AM-10:00 AM } & \text { MAA Minicourse \\#4: Part B } \\ & \text { The Global Classroom: Using the Web }\end{array}$ as an interactive learning environment
8:00 AM-10:00 AM MAA Minicourse <br>\#9: Part B Making liberal arts mathematics the most important course students take to learn effective thinking
8:00 AM-10:55 AM MAA Session on Innovative Practices in Statistics Education, II
8:00 AM-10:55 AM MAA Session on Integrating Mathematics and Other Disciplines, II
8:00 AM-10:55 AM MAA Session on Implementation of National Projects on Local Campuses
8:00 AM-10:55 AM MAA Session on Putting the "Service" Back into Service Courses

8:00 AM-10:55 AM MAA Session on College Mathematics in Depth with Dynamic Mathematics Software
8:00 AM-10:55 AM AMS Sessions for Contributed Papers
8:30 AM-5:00 PM AWM Workshop
8:30 AM-10:00 AM AMS Committee on Education Panel Discussion

9:00 AM-9:50 AM MAA Invited Address Peter M. Winkler Collision and percolation
9:00 AM-10:30 AM MAA Panel Discussion Restructuring the mathematics bachelor degree
9:00 AM-10:30 AM MAA Special Presentation The pedagogical potential of computer symbolic algebra in the teaching of precalculus and calculus
9:00 AM-10:30 AM MAA Panel Discussion Writing and the mathematics classroom

9:00 AM-9:50 AM NAM Panel Discussion Titte to be announced
9:00 AM-5:00 PM Association for Symbolic Logic Invited Addresses and Contributed Papers
9:00 AM-12:00 PM Book Sales and Exhibits
9:00 AM-1:00 PM Employment Center Intenview center
10:00 AM-10:40 AM NAM Business Meeting
10:05 AM-10:55 AM MAA Invited Address
Nars Peterson
A kaleidoscope of mathematics and art
11:10 AM-11:40 AM MAA Business Meeting
11:45 AM-12:15 PM AMS Business Meeting
1:00 PM-2:00 PM NAM Invited Address
1:00 PM-5:30 PM MAA-AMS Special Session on History of Mathematics, IV
1:00 PM-5:00 PM AMS Special Session on Applications of Mathematics to Human Physiology and Medicine, IV
1:00 PM-5:30 PM AMS Special Session on Analysis on Infinite Dimensional Spaces (in honor of Leonard Gross), III

| 1:00 PM-5:30 PM | AMS Special Session on Analytic Number Theory, IV |
| :---: | :---: |
| 1:00 PM-5:30 PM | AMS Special Session on Partial Differential Equations and Geometric Implications, III |
| 1:00 PM-5:30 PM | AMS Special Session on Stochastic Analysis and Applications, III |
| 1:00 PM-5:30 PM | AMS Special Session on Integral Transforms, IV |
| 1:00 PM-5:30 PM | AMS Special Session on Discrete Geometry, III |
| 1:00 PM-5:30 PM | AMS Special Session on Interaction of Inverse Problems and Image Analysis, III |
| 1:00 PM-3:00 PM | MAA Minicourse |
| #11: Part B The mathematics of decision making |  |
| 1:00 PM-3:00 PM | MAA Minicourse <br> #14: Part B <br> Discrete dynamical systems, mathematics, methods, and models |
| 1:00 PM-3:00 PM | MAA Minicourse |
| #5: Part B Creating and exporting computer animations to the Web |  |
| 1:00 PM-2:30 PM | MAA Task Force on Articulation Panel Discussion Articulation: Is the transition to college mathematics as smooth as we think it is? |
| 1:00 PM-2:30 PM | MAA Panel Discussion Professor for the Future programs in mathematics |
| 1:00 PM-2:30 PM | MAA-AMS Joint Panel Discussion Philosophy of mathematics: That which is of interest to mathematicians |
| 1:00 PM-5:55 PM | AMS Sessions for Contributed Papers |
| 2:15 PM-3:05 PM | AMS Invited Address Ingrid Daubechies Analog-to-digital conversion: A case study of interaction between mathematicians and electrical engineers |
| 2:45 PM-4:15 PM | MAA Open Discussion on Reforming College Algebra |
| 2:45 PM-4:15 PM | MAA Panel Discussion Mathematics and the mathematical sciences in 2010: What should graduates know? |
| 3:15 PM-5:15 PM | MAA Minicourse |
| #3: Part B Teaching contemporary statistics with active leaming |  |
| 3:45 PM-5:15 PM | MAA Committee on <br> Two-Year Colleges <br> Panel Discussion Teaching to attract potential teachers |
| 6:30 PM-10:00 PM | AMS Banquet |

# Mathematical Sciences Employment Center 

## OVERVIEW OF THE EMPLOYMENT CENTER

The Employment Center (formerly the Employment Register) serves as a meeting place and information center for employers and Ph.D.-level jobseekers attending the Joint Mathematics Meetings. Most applicants and employers began the search process in the fall, and are looking for an opportunity to meet in person with those with whom they've already had communication. Some, however, use the Employment Center as a way to make some initial contacts, gather information, and distribute their own information. This is a less effective, but common, use of the program. The Employment Center allows everyone to choose a comfortable level of participation, by seeking interviews for any of the open hours, or by limiting schedules to certain days or hours.

The Employment Center is a three-day program which takes place on the Wednesday, Thursday, Friday, and Saturday (morning only) of the Joint Meetings. Most participants register in advance (by the November 7 deadline) and their brief résumé or job description is printed in a booklet which is mailed to participants in advance.

The Employment Center houses two services: the com-puter-scheduled interview tables (the Scheduled Employment Register), and the employer-scheduled interview tables (the Interview Center). Use of the Center overall by employers has gone up in recent years. At the 2000 Employment Center, 390 candidates and 152 employers participated, giving an overall applicant-to-employer ratio of 2.5:1 (compared with 355 applicants and 104 employers in 1999, a ratio of 3.4:1). Each applicant ends up with roughly 5 to 12 interviews of various types. Those with the most interviews are those requested most by employers, usually a result of a careful application process during the months before the Employment Center takes place.

At the January 2001 Employment Center, job candidates will be able to choose how to participate. Two forms of participation will be available:

All Employment Center services (computerscheduling system, form posted in Winter List of Applicants, Winter List of Employers received by mail, use of Employment Message Center, availability for employer-scheduled Interview Center).

Message Center and Winter Lists only (form posted in Winter List of Applicants, Winter List of Employers received by mail, use of Employment Message Center, availability for employer-scheduled Interview Center, BUT NOT use of the computerscheduling system).
No matter which option is chosen, advance registration works best so that the Applicant Form (received by November 7, 2000) can be printed in the Winter List which will be distributed to employers.
Employer forms submitted by registered employers have no connection with the AMS on-line job ads (EIMS). Submitted forms are not available for browsing on the Web. They are reproduced in the Winter List booklet for use by Employment Center participants.

The Mathematical Sciences Employment Center is sponsored by the Mathematical Association of America, the American Mathematical Society, and the Society for Industrial and Applied Mathematics; it is managed by members of the AMS staff, with the general guidance of the MAA-AMS-SIAM Committee on Employment Opportunities.

## THE EMPLOYMENT REGISTER COMPUTER-SCHEDULING SYSTEM

Employers register in advance by the November 7 deadline, and their job listings ("Employer Forms") are printed and distributed in late December to applicants.
Employers receive the book of brief, numbered applicant résumés in late December. Participants decide on Wednesday, January 10 , which of the eight sessions (of five interviews each) they will participate in and submit their Availability/Interview Request Forms by 4:00 PM Wednesday. Employers can reserve time for other Joint Meetings events by marking "unavailable" for one or more of the eight sessions. Employers can request ten specific applicants per day, assuming they are available for all four sessions that day. Usually those requests will be filled by the scheduling algorithm, provided the applicants are present, except in the case of the few most-requested applicants. The rest of their interviews will be with applicants who ask to see them. Employers should be specific about their requirements on the Employer Form to avoid interviews with inappropriate candidates.

Schedules are distributed for all Thursday and Friday interviews on Thursday morning. The schedule allows 15 -minute interviews, with 5 minutes between for note taking. One or more interviewers for the same position(s) may interview at the table separately, together, or in shifts. For follow-up interviews, the scheduled tables will also be available for use until 7:30 PM on Thursday and Friday and on Saturday morning from 9:00 AM-1:00 PM.
Participation in the scheduling program has become optional for applicants, so employers will notice some applicant résumés in the Winter List of Applicants with no applicant number. An employer can arrange to interview such an applicant outside of the scheduled interview sessions-for instance, between 4:40 PM and 7:30 PM Thursday or Friday, or on Saturday momingor during sessions which they left unscheduled.

Employers who are interviewing for two distinct positions may wish to pay for two tables. See the instructions under "How to Register". Employers should bring school catalogs, corporate reports, or more lengthy job descriptions to the Employment Centrer early on Wednesday for perusal by applicants prior to interviews.

## THE EMPLOYER-SCHEDULED INTERVIEW CENTER

The Interview Center allows any employer to reserve a table in an area adjacent to the Employment Center. Employers will arrange their own schedule of interviews, either in advance or on site, by using the Employment Message Center. Employers who have never used the Employment Center before might want to try conducting interviews at this convenient location. Since they will be setting their own schedules, employers will have complete control over whom they'll see, for how long, and when they'll be interviewing. This allows employers to pursue other activities at the Joint Meetings.

MATHEMATICAL SCIENCES EMPLOYMENT CENTER


2001 JOINT MATHEMATICS MEETINGS NEW ORLEANS MARRIOTT AND sheraton hotels NEW ORLEANS, LOUISIANA JANUARY 10-13, 2001

# MATHEMATICAL SCIENCES EMPLOYMENT CENTER 

## 2001 EMPLOYMENT CENTER SCHEDULE

WEDNESDAY, JNNUARY 10
7:30 AM-4:00 PM
Registration and materials pick-up
9:00 AM-9:30 AM
Short (optional) orientation session
9:30 AM-4:00 PM
Submission of Scheduled Employment Register interview request forms for both Thursday and Friday interviews. No request forms can be accepted after 4:00 PM Wednesday.

## 9:30 AM-6 PM

Interview Center open
No Scheduled Employment Register interviews are held on Wednesday.

## THURSDAY, JANUARY 11

## 7:00 AM-8:15 AM

Distribution of interview schedules for both Thursday and Friday, for those participating in the Scheduled Employment Register.

## 8:15 AM-4:40 PM

Scheduled Employment Register interviews in 4 sessions: Session 1: 8:15 AM-9:50 AM Session 2: 10:00 AM-11:35 AM Session 3: 1:00 PM-2:35 PM Session 4: 3:00 PM-4:35 PM
8:00 AM-7:30 PM
Interview Center open

## FRIDAY, JRNUARY 12

## 8:15 AM-4:40 PM

Scheduled Employment Register interviews in 4 sessions:
Session 5: 8:15 AM-9:50 AM
Session 6. 10:00 AM-11:35 AM
Session 7: 1:00 PM-2:35 PM
Session 8. 3:00 PM-4:35 PM
8:00 AM-7:30 PM
Interview Center open
(doors open at 7:30 AM;
do not schedule before 8:00 AM)
SATURDAY, JANUARY 13
9:00 AM-1:00 PM

The Center will be open only during the following hours:
Wednesday, January 10, 2001 • 9:30 AM-6:00 PM
Thursday, January 11, 2001 • 8:00 AM-7:30 PM
Friday, January 12, 2001 • 8:00 AM-7:30 PM
Saturday, January 13, 2001 • 9:00 AM-1:00 PM
The fee for use of this area is the same as the normal employer fee. It is requested that all employers fill out an Employer Form for inclusion in the Winter List. This should clarify to Employment Center applicants what type of position is being filled. If an employer is unable to accept new applicants because the deadline has passed, that should be stated on the form.

The Winter List of Applicants, containing information about the candidates present at the Employment Center, will be mailed to all employers in advance of the meeting.

Employers scheduling interviews in advance should tell applicants to find the table with the institution's name in the Interview Center (not the numbered-table area). Employers can schedule any time during the open hours listed above. To schedule interviews after arriving in New Orleans, leave messages for Employment Center applicants in the Employment Message Center. Paper forms will be provided to help speed the invitation process. Each employer will be provided with a box in the Message Center where applicants can leave items.
Employers should have at most two interviewers per table at any time due to space limitations. There will be no outlets or electricity available at the interviewing tables.

## INFORMATION BOOTH TABLES FOR INFORMAL DISCUSSIONS

These tables will not be available this year due to space constraints. However, an employer needing a walk-up table for a few hours can request a space at the Employment Center registration desk.

## ABOUT THE WINTER LIST OF APPLICANTS

This booklet contains hundreds of résumés of applicants registered by November 7 for the Employment Center. It will be mailed to all employers who register by November 7 who indicate on their Joint Meetings registration form that they would like their materials mailed. Employers should be aware that there will be hundreds of brief résumés to look through and should be sure to obtain the Winter List of Applicants as early as possible.

## EMPLOYERS

## NOT PLANNING TO INTERVIEW

Employers who do not plan to participate in the Employment Center at all may display a job description. This description must be submitted on the Employer Form, which appears in the back of this issue, with the appropriate box checked indicating that no interviews will take place. A fee of $\$ 50$ is charged for this service (paid through the Joint Meetings registration form). The form must be received in the Providence office (with payment or purchase order) by the November 7 deadline, to appear in the Winter List of Employers. Forms received in the Providence office after that deadline will be displayed at the meeting. Those wishing to bring a one-page job description to the Employment Center desk for display during the Meetings may do so at no charge.

## EMPLOYERS: HOW TO REGISTER

The interviewer should register and pay for the Joint Mathematics Meetings by:

Indicating on the Joint Meetings registration form (available electronically at uww.ams.org/ amsmtgs/2025_intro.html, or in the back of the October issue of the Notices) that you are also paying the Employment Center employer fee. Indicate your choice of tables. Mark all that apply.
Submitting an Employer (job listing) Form electronically at www.ams.org/emp-reg/, or using the print version in the back of this issue. Be sure the form indicates which type or types of tables will be used. This form will be printed in the Winter List of Employers.
It's important to register by the November 7 deadline, in order for your form to be included in the Winter List of Employers. However, registration will be accepted up to December 15 for the normal fees or on site in New Orleans at the on-site rates. Call 800-321-4267, ext. 4105, with any questions or deadline problems.
Any number of interviewers can sit at a table together or in shifts, and their names should be listed on the Employer Form as a reference point for the applicants. However, Employment Center fees should be paid only for each table required.

In a few unusual cases an institution will be conducting interviews in the Employment Center for two or more distinct positions and will not want to conduct these interviews at one table. In that case two or more Employer Forms should be submitted, and separate tables and employer numbers will be provided. Applicants will then be able to request interviews for the appropriate job by employer number. First and second table fees should be paid.

The fee for all employers to register in advance is $\$ 200$ for the first table and $\$ 50$ for each additional table. Onsite registration fees (any registrations after 12/15/00) are $\$ 250$ for the first table and $\$ 75$ for each additional table. Employers must also register for the Joint Meetings and pay the appropriate Joint Meetings fee.

## EMPLOYERS: REGISTRATION ON SITE

Employers who do not register for the Joint Mathematics Meetings and the Employment Center by December 15 may register on site in New Orleans at the Joint Meetings Registration Desk. They must bring their receipt to the Employment Center desk between 7:30 AM and 4:00 PM on Wednesday, January 10, to receive their materials. A typed copy of the Employer Form (found in the back of this issue) can be brought to the Employment Center for posting on site (or the form can be handwritten on site). If registering for the employer-scheduled Interview Center only, registration on Thursday is possible.
In 2001, applicants will be given flexibility in deciding how to participate in the Employment Center. There are two options:

All Employment Center services (computerscheduling system, form posted in Winter List of Applicants, Winter List of Employers received by mail, use of Employment Message Center, availability for employer-scheduled Interview Center).

Message Center and Winter Lists only form posted in Winter List of Applicants, Winter List of Employers
received by mail, use of Employment Message Center, availability for employer-scheduled Interview Center, BUT NOT use of the computerscheduling system). This option is available at a slightly lower price.

Applicants who participate in the 2001 Employment Center will find themselves talking with employers in two different settings:

1. A computer-scheduling program sets 15 -minute interviews in the Employment Register numbered tables. This is the choice that has now become optional for applicants. Applicants do not have to hand in a computer-scheduling form at all.
2. There is also an Interview Center, where employers set their own schedules. These employers do not participate in the scheduling program, so applicants have no automatic access to interviews with them. They determine their own schedules and make their own appointments privately, either in advance or on site using the Employment Message Center. These interviews have always been "optional" for applicants since they may turn down any written invitation they receive. Applicants are reminded to respond to all invitations promptly.

## the SChedule

For applicants using all services, there is a certain scheduling burden placed on them to juggle these simultaneous services. However, computer-scheduled sessions are in small blocks, for a total of eight sessions over the two days of interviews (Thursday and Friday). This allows applicants, once they receive invitations to interview in the Interview Center, to accept, knowing that when they submit the computer schedule request on Wednesday, they can mark that they are unavailable for one or more of these sessions without seriously jeopardizing their chances of obtaining scheduled interviews. Likewise, applicants who are scheduled to give a talk can avoid interviews for that time. Applicants are encouraged to schedule their time in advance in this manner and not wait for the computer schedule to be distributed Thursday morning.

## INTERVIEWS

Applicants should understand that the Employment Center provides no guarantees of interviews or jobs. It is simply a convenient meeting place for candidates and employers who are attending the Joint Meetings. Those who have not yet begun their job search efforts may go unnoticed at the Employment Center (although applicants will likely receive a minimum of between one and three interviews in the scheduled program). Attention generally goes to candidates who already have applied for open positions or to those who are well suited for teaching positions at liberal arts colleges.

Data from recent Employment Centers show that women represent about half of the most sought-after applicants, although they make up less than half of the total Employment Center applicant pool. Those without permanent authorization to work in the United States will find themselves far less requested than U.S. citizens or permanent residents. Newer Ph.D.'s tend to be invited for more interviews than those who have been working longer. Most jobs listed require a doctorate.

## PREPARATIONS

Candidates just beginning a job search should realize that employers have no method to judge their credentials other than the brief résumé form, and they should make an effort to make it distinct and interesting.

Applicants who register in advance will receive the Winter List of Employers in late December. If time permits, they should apply for suitable open positions they notice in the Winter List of Employers after they receive it. Applicants are advised to bring a number of copies of their vita or résumé so that they may leave them with prospective employers. It is a good idea in the fall for applicants to alert any employer to whom applications are made that they plan to be present at the Joint Meetings. Also, they should bring enough materials with them to accompany requests for interviews they may want to leave in the Message Center boxes of the Interview Center employers.

Applicants are also encouraged to leave some extra copies of their résumés in their own message folders, so that interested employers may find them there. Photocopying costs at a convention are high, so applicants should come prepared with a reasonably large number of copies. A brightly colored form in each folder gives applicants an opportunity to present some information about their availability during the Meetings, for public perusal.

The Winter List of Applicants is mailed to all employers in advance, so it is vital that the Joint Meetings registration form, applicant résumé form, and payments be received by the November 7 deadline so the Applicant Form can be printed in the book. This greatly increases an applicant's chances of being invited to the Interview Center.

Applicants should keep in mind that interviews arranged by the Employment Center represent only an initial contact with the employers and that hiring decisions are not ordinarily made during or immediately following such interviews.

## APPLICANTS: <br> ADVANCE REGISTRATION IS IMPORTANT

Applicants will be registered when they have completed the following steps:
Register and pay for the Joint Mathematics Meetings (see form in the back of the October issue of the Notices or the electronic information at uww.ams.org/amsmtgs/2025_intro.htmI).

Mark one of the two "Employment Center Applicant fee" boxes on the Joint Meetings registration form and pay the appropriate fee. If you choose "Message Center and Winter List only", you will not receive, or turn in, an Interview Request/Availability Form.

Submit the Applicant Form (a brief résumé form) electronically at uww.ams.org/emp-reg/. Each Applicant Form will be reproduced in a booklet, the Winter List of Applicants, and distributed to all registered employers. Applicant Forms received after November 7, 2000, cannot be included in the booklet. The booklet allows employers more time to examine each candidate's qualifications in advance.
Advance registration fees for applicants using the full Employment Center services are $\$ 40$ plus Joint Meetings registration fee, vs. $\$ 75$ on-site registration fee plus Joint Meetings registration fee. The applicant "Message Center and Winter List only" registration is $\$ 20$ in advance or on site.
Advance registration for the Employment Center will continue after the November 7 deadline until the final registration deadline of December 15, 2000. However, the Applicant Form will NOT be included in the Winter List, but will be posted on site at the Employment Center (a serious disadvantage). Those who do not register by December 15 must register on site at the Joint Meetings Registration Desk and pay the higher fees.

It is worthwhile to submit the Applicant Form even if you miss the November 7 deadline. An unexpected delay in publication may allow your late form to get into the book. At the very least, your printed-out form will be brought to the Meetings by staff and displayed there (after all the fees have been paid).

Applicants registered by November 7 will receive their Employment Center materials two to three weeks in advance of the meeting, unless they request otherwise. The package will include the complete job announcements received from employers registered by November 7.

Don't forget, all participants in the scheduled section of the 2001 Employment Center must submit their Interview Request/Availability Forms in person between 9:30 AM and 4:00 PM on Wednesday, January 10, 2001, or they will not be included when the interview-scheduling program runs Wednesday night. Should unexpected delays occur while travelling, contact the Employment Center by telephone at 401-455-4107 (or 800-321-4267, ext. 4107) before 4:00 PM EST on Wednesday, January 10.

## APPLICANTS: REGISTERING ON SITE

Feel free to enter the Employment Center area first to consult staff about the decision to register on site and to check on which employers are participating. Full registration on site early Wednesday is allowed for a higher fee but is severely discouraged. Most employers will not notice an Applicant Form which arrives on Wednesday. Therefore, these individuals will receive only a couple of computer-scheduled interviews. Registration on site is advisable only for those who know they will be interviewed in the Interview Center and would like a Message Center folder for employers to leave messages in. This year registering on site for a mailbox only is possible, at the $\$ 20$ rate, on Wednesday and Thursday.


## CALIFORNIA

## Cal State Polytech Univ. Pomona

## Department of Mathematics

Tenure-track in pure math and math education, Asst Prof rank (second position with similar description to be announced later). Duties: teach major \& service courses in secondary teaching/pure option; advise students seeking secondary teaching credential; interact with Center for Education \& Equity in Math, Sci. \& Tech. and School of Ed. Min qual: Ph.D. in pure math with ability to teach geometry, number theory, topology and strong background in math ed. or doctorate in math ed. with ability to teach upper division pure math courses. Evidence of teaching excellence, potential for conducting scholarly activities. Completion of terminal degree by Sept. '01. Initial review of applications: $12 / 15 / 00$, continues until position is filled or closed. Submit application form, vitae, transcripts, and min. of 3 reference letters to Faculty Search Committee, Math Dept., Cal Poly Pomona, 3801 W. Temple Ave, Pomona, CA 91768-4007; 909-869-4008; Fax: 909-869-4904; e-mail: Imborchert@csupomona.edu. AAVEEO. See http://uww.csupomona.edu/~math.

## Humboldt State University

Humboldt State University (HSU) invites applications for 3 tenure-track positions for AY 2001-02 with specialization in (1) Analysis (job \# 01/02-04, (2) Number Theory/Algebra (\#01/02-05) and (3) Mathematical Modeling (\#01/02-06). For more information, see http://www.humboldtedu/~mathdept Send letter describing background and interest in teaching, vita, transcripts, three letters of reference for teaching to: Search Committee, Mathematics Department, Humboldt State University, Arcata, CA 95521-8299. HSU is an EO/AA employer on the California coast 280 miles north of SF.

## CONNECTICUT

## Wesleyan University

The Department of Mathematics and Computer Science invites applications for a senior position in mathematics to begin in the academic year 2001-2002. Candidates for this position must have a Ph.D. in mathematics and are expected to have strong records in research, teaching, and leadership.

## Professor/Associate Professor of Mathematics:

 We seek candidates for a tenured appointment. We are particularly interested in candidates who can support the department's long-standing activity in dynamical systems. Outstanding candidates in all areas of mathematics are encouraged to apply.Note: We anticipate two junior level openings in the department as well; these will be advertised later in the fall.

Normal teaching duties in mathematics are two courses per semester. These courses range from calculus to graduate topics. It is expected that the successful candidate will assume an active leadership role in the department, including advising doctoral students, participating in the appointment of junior faculty, and chairing the department in due course.

Wesleyan University is committed to increasing the diversity of its faculty and is an equal opportunity/ affirmative action employer.

Applications must be submitted by October 27, 2000, and early application is welcome. Applicants should arrange for at least four letters of recommendation, including one which evaluates teaching, to be sent to the address below.

All correspondence and applications should be submitted to:

Mathematics Search Committee
Department of Mathematics
Wesleyan University
Middletown, CT 06459
Email inquiries may be directed to mathjobs@wesleyan.edu
More information concerning the Department of Mathematics and Computer Science and about Wesleyan University can be found via http://www.math.wesleyan.edu/

## HAWAII

## University of Hawaii At Hilo

ASSISTANT PROFESSOR OF MATHEMATICS: Position Number 82381, College of Arts \& Sciences, pay range 13, general funds, full-time, tenure-track, nine-month appointment, to begin approximately August 2001, pending position clearance and funding. DUTIES: Teach courses in mathematics; advise students; engage in scholarly activities, and/or creative endeavors which contribute to the mission of the University. Perform service to the University and community. MINIMUM QUALIFICATIONS: Ph.D. in Mathematics from an accredited college or university; evidence of commitment to excellence in teaching; ability to communicate clearly in written and spoken English. DESIRABLE QUALIFICATIONS: Evidence of successful undergraduate teaching in a multi-cultural setting, ability to teach introductory numerical analysis. SALARY: Minimum of $\$ 32,028$ per year. APPLICATIONS: Submit letter of application, vita, and three (3) current letters of reference to: Dr. Carole Miura, Chair, Mathematics Dept, College of Arts \& Sciences, University of Hawai at Hilo, 200 W. Kawili St, Hilo, HI 96720-4091. INQUIRIES: (808) 974-7321. APPLICATION DEADLINE: Postmarked no later than December 31, 2000. An EEO/AA Institution.

## ILLINOIS

## University of Illinois At Chicago

The Department has active research programs in all areas of pure mathematics, computational and applied mathematics, combinatorics and computer science, statistics, and mathematics education. See http://wwwmath.uic.edu for more information. Applications are invited for the following positions, effective August 21,200 1.
Tenure track or tenured position. Candidates in all areas of interest to the Department will be considered. The position is initially budgeted at the Assistant Professor level, but candidates with a sufficiently outstanding research

EMPLOYMENT OPPORTUNITIES


## 2001

JOINT
MATHEMATICS
MEETINGS
new orleans marriott and Sheraton hotels NEW ORLEANS, louisiana JANUARY 10-13, 2001

EMPLOYMENT OPPORTUNITIES


2001
JOINT
MATHEMATICS MEETINGS
NEW ORLEANS marriott and SHERATON HOTELS NEW ORLEANS, LOUISIANA JANUARY 10-13, 2001
record may be considered at higher levels. Applicants must have a $\mathrm{Ph} . \mathrm{D}$. or equivalent degree in mathematics, computer science, statistics, mathematics education or related field, an outstanding research record, and evidence of strong teaching ability. Salary negotiable.

## Research Assistant Professorship/VIGRE

Postdoctoral Fellowship. This is a non-tenure track position, normally renewable annually to a maximum of three years. This position is partially funded by a VIGRE grant from the NSF and is open only to U.S. citizens, nationals or permanent residents. The position carries a teaching load of one course per semester, with the requirement that the incumbent play a significant role in the research life of the Department. The salary for AY 2001-2002 for this position is expected to be $\$ 45,000$; in each of the first two years the VIGRE grant provides an additional $\$ 6,000$ for summer support. Applicants must have a Ph.D. or equivalent degree in mathematics, computer science, statistics, mathematics education or related field, and evidence of outstanding research potential.

Send vita and direct 3 letters of recommendation, clearly indicating the position being applied for, and whether you are eligible for a VIGRE fellowship, to: Appointments Committee; Dept. of Mathematics, Statistics, and Computer Science; University of Illinois at Chicago; 851 S. Morgan (M/C 249); Chicago, IL 60607. No e-mail applications will be accepted. To ensure full consideration, materials must be received by October 31,2000 . Minorities, persons with disabilities, and women are particularly encouraged to apply. UIC is an AA/EOE.

## MASSACHUSETTS

## Amherst College

Applications are invited for a tenure-track position in Mathematics at the Assistant Professor level, beginning in August 2001.

Amherst College is a private liberal arts college for men and women that emphasizes scholarship and excellence in undergraduate teaching. We attract bright students and have a lively faculty and an administration committed to a strong mathematics program.

Departmental responsibilities include teaching a wide range ofundergraduate courses and supervising undergraduate theses. Faculty are expected to maintain vigorous research programs. Professors teach two courses each semester. The department faculty and students are supported by a network of Sun workstations.

Applicants should hold a Ph.D. in mathematics. The Department seeks candidates with broad intellectual interests, a strong commitment to excellence in research and undergraduate teaching, and the ability to develop a research program with opportunities for undergraduate participation. Candidates should submit a current curriculum vita, a list of publications, graduate and undergraduate transcripts, a letter describing plans for teaching and research, and three letters of recommendation. For full consideration, applications should be completed by December 1, 2000.

Amherst College has some 1650 students and 165 faculty members. It is located in the valley of the Connecticut river in Western Massachusetts. Our environment is enhanced by our proximity to the nearby University of Massachusetts and Hampshire, Mount Holyoke and Smith Colleges.

Amherst College is an Equal Opportunity/Affirmative Action Employer, and encourages women, minorities, and disabled persons to apply.

Reply to:
Prof. David Cox, Chair
Search Committee
Department of Mathematics and Computer Science
Amherst College
P O Box 5000
Amherst, MA 01002-5000
e-mail queries to: search@math.amherstedu

## OREGON

## Portland State University

## Department of Mathematical Sciences

 Mathematics Education PositionAssistant or associate professor in mathematics education, starting September 16, 2001. Ph.D. in mathematics education with the equivalent of a masters degree in mathematics, demonstrated excellence in teaching, and evidence of outstanding research potential.

Teach mathematics and mathematics education courses, advise students, and direct dissertations in a mathematics education programs including; middle school math graduate certificate; BS/BA; MST/MAT; and Ph.D. in mathematics education. Develop a strong research program in mathematics education that includes the procurement of external funding for research.

See also (http://umw.mth.pdx.edu). Application to include (1) a letter of intent, (2) a curriculum vitae, and (3) three letters of recommendation.

## Send to:

Search Committee
Department of Mathematical Sciences
Portland State University
P.O. Box 751

Portland, OR 97207-0751
Deadline: December 31, 2000. Portland State University is an Affirmative Action/Equal Opportunity Institution.


## SOUTH CAROLINA

## Tri-County Technical College

Mathematics Instructor with possible Department Head Appointment. Responsible for curriculum development, full-time and adjunct administration, budgeting, student advising, and interdepartmental affairs. Position also entails teaching of freshman-level and sophomorelevel courses in math for technical, business, and health programs as well as university transfer programs. MINIMUM QUALIFICATIONS: Master's degree with 18 graduate hours in math required. Commitment to the community college philosophy with five years community college teaching experience, a Ph.D. and administrative experience preferred. ANTICIPATED HIRING SALARY: Negotiable within State guidelines. CLOSING DATE: Open until filled. Applications will be reviewed beginning immediately. Please reference Job \#00T4006. Send resume to: Tri-County Technical College, Personnel Office, P.O. Box 587, Pendleton, SC 29670,...EOE/ADA.

## VIRGINIA

## Mary Washington College

The Department of Mathematics invites applications for a tenure-track position at the Assistant Professor level to begin August 16, 2001. A Ph.D. in Mathematics, Applied Mathematics, or Statistics is required. Candidates must be committed to excellence in teaching in an undergraduate liberal arts environment.

Responsibilities include teaching mathematics and statistics courses, continuing scholarly activity, and service to the Department and College. Candidates interested in developing new courses in statistics or applied mathematics within a traditional mathematics program, and in directing undergraduate research projects or internships are particularly encouraged to apply.

Mary Washington College is a selective, state-supported college with approximately 4,000 students, located halfway between Washington, DC and Richmond, Virginia. Further information about the College and Department can be found on our web page (wnw.mwc.edu).

A complete application consists of a letter of interest, curriculum vitae, copies of graduate transcripts, a statement on teaching philosophy, and three letters of recommendation. These materials should be sent to: Mathematics Search, Department of Mathematics, Mary Washington College, 1301 College Avenue, Fredericksburg, VA 22401-5358. To ensure full consideration, complete applications must be received by 5 PM , November 3, 2000. Postmarks will not be honored. Mary Washington College is deeply committed to affirmative action and strongly encourages minorities and women to apply.

## WASHINGTON

## Seattle Universtiy

## Mathematics Department Faculty Positions for the Academic Year 2001-2002

Seattle University invites applications for three tenuretrack positions in mathematics beginning September, 2001. The positions are open to mathematicians in any area of pure or applied mathematics, but preference may be given to those whose teaching and research interests complement those of our mathematics faculty. At least two of the positions will be filled at the assistant professor level; for the third position, an exceptional applicant with qualifications and teaching experience appropriate to the associate professor level will be considered.

Seattle University, founded in 1891, continues a 450-year tradition of Jesuit higher education within its Catholic heritage. The Universityis Jesuit ideals underscore its commitment to the centrality of teaching, learning and scholarship, of values-based education, of service and social justice, of lifelong learning and of educating the whole person. Located in the heart of dynamic Seattle, the university is the largest independent Catholic university in the Pacific Northwest, serving approximately 6000 undergraduate and graduate students. The Mathematics Department is a vital component of the School of Science and Engineering, providing teaching support for all areas of the university as well as for mathematics majors.
Requirements for each position include: a Ph.D. in mathematics or applied mathematics; demonstrated excellence in teaching undergraduate mathematics; strong teaching recommendations; a commitment to continued scholarly growth, to the use of technology in teaching, and to contributing to the mission of Seattle University.
A complete application must include a cover letter addressing how you could contribute to our mission in addition to the AMS Standard Cover Sheet, curriculum vitae, unofficial graduate transcripts, statements of your teaching philosophy and research plans, and three letters of reference including phone numbers.

Please send to:
Mathematics Search Committee
Mathematics Department
Seattle University
900 Broadway
Seattle, WA 98122-4340.
Closing date: December 4, 2000. Seattle University is an Affirmative Action/Equal Opportunity educational institution and employer, and welcomes applications from underrepresented minorities and women.

For more information about the Mathematics Department at Seattle University as well as these positions, visit our website at $h t t p: / / m w w$. seattleu.edu/scieng/math.

## NOTES



2001
JOINT
MATHEMATICS
MEETINGS
NEW ORLEANS
MARRIOTT AND
SHERATON HOTELS NEW ORLEANS, louisiana
JANUARY 10-13, 2001

$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$


## 2001

JOINT
mathematics
MEETINGS
NEW ORLEANS
MARRIOTT AND
SHERATON HOTELS
NEW ORLEANS,
louisiana
JANUARY 10-13, 2001

## Things Of This World Cannot Be Known Without Mathematics.

## -ROGER BACON



02000 TI ADOO 17.uls

Texas Instruments works closely with educators at all levels developing technology that best meets your needs. Derive ${ }^{\text {rm }} 5$ for Windows $^{\circledR}$ is our most advanced software tool. Approximate solutions to thousands of digits, solve equations algebraically and numerically, and model functions as 2D graphs or 3D surfaces. Derive 5 for Windows is the mathematical assistant for your PC.

As a leader in educational technology, we design products that enable you and your students to explore, discover, and do more. Learn more about our products and support programs by visiting www.ti.com/calc




[^0]:    GAANN Poster Session on Sharing of Results by Future Mathematicians from Under-represented Areas
    Wednesday, 5:15 PM-7:15 PM
    organized by Robert F. Olin, Virginia Polytechnic Institute and State University

    Several mathematics departments are receiving GAANN (Graduate Assistance in Areas of National Need) funds

[^1]:    2001
    JOLNT MATMEMNTICS MEETANES NEW ORLEANS MARRIOTT AND SHERATON HOTELS NEW ORLEANS, LOUISIANA JANUARY 10-13, 2001

