2006 MAA Missouri Section Meeting

The **Mathematics Department** of the **University of Missouri at Columbia** is looking forward to hosting the **Spring Meeting of the Missouri Section of the Mathematics Association of America** on Friday March 31 and Saturday April 1, 2006. One speaker, MAA Polya Lecturer, Steven Rudich has been confirmed at this time. Professor Rudich's research interest is computational complexity, especially the P vs. NP question. He is also a magician and reportedly enhances his presentations with magic. More information about the conference will be posted here as it develops.

CALL FOR PAPERS

You are invited to present a paper at the Spring Meeting. Papers are to be between 15 and 20 minutes in length and may be on research topics or expository in nature and may deal with any topic in mathematics or mathematics education. For example, papers may pertain to your current mathematical scholarly activity, new courses that you have developed, or successful techniques you have found useful in teaching. You may opt to design a presentation directed to the undergraduate and graduate students attending the meeting.

Also, faculty are urged to assist honors students in presenting papers at the meeting. MAA student memberships will be awarded as prizes for the top student papers.

The abstract form is on the last page of this newsletter. Abstracts should be submitted by mail to:

> Dix Pettey
> Department of Mathematics
> University of Missouri
> Columbia, MO 65211

or attached to an e-mail sent to dix@math.missouri.edu.

Please include all of the information requested on the abstract form: presenter's name, title, affiliation, contact information, title of paper, abstract, AMS subject classification, and special accommodations needed (overhead projector, computer, etc.). Also please indicate if the speaker is a student and if the paper is directed toward a student audience. Deadline for receipt of abstracts is **February 1, 2006.**

MAKO Undergraduate Research Conference

Undergraduates and faculty from Missouri, Arkansas, Kansas, and Oklahoma are invited to the first MAKO Undergraduate Mathematics Research Conference. The conference will be held on Saturday, November 12, 2005, at Missouri State University (formerly Southwest Missouri State University). The highlight of the conference will be short presentations by undergraduates on their research.

The conference will be co-hosted by Drury University, Evangel University, Missouri State University, and Southwest Baptist University. Funding for this conference is provided by NSF grant DMS-0241090 through the MAA Regional Undergraduate Mathematics Conferences Program, http://www.maa.org.

For more information, visit http://math.missouristate.edu/undergradconference.html.

CALL FOR PAPERS

Papers submitted for presentation at the conference should discuss material understandable by undergraduates who have completed only calculus courses. Presentations should take 15 to 25 minutes. Papers should be designed with these limits in mind. The Selection Committee will favor papers that satisfy this criterion and which can be presented with reasonable completeness within the time allotted. Papers may be original research by the student(s) or expositions of interesting but not widely known results. Each presenter will be given a cash award. Any undergraduate student may submit an abstract of a paper for consideration. A paper may be co-authored. If the paper is selected for presentation at the conference, it must be presented by one or more of its undergraduate authors. An abstract of the paper, with a description of any visual aids that will be used during the presentation, must submitted electronically by **October 21, 2005** to Les Reid les@math.missouristate.edu.

Future Meeting Sites

The Spring Meeting is held at various locations around the state. The meeting sites for the past several years and the next seven years are listed below for your convenience. If your campus would be willing to host a Spring Meeting, then please contact Dix Pettey, Chair, or any other member of the Executive Committee.

1985	Central Missouri State University	1999	Rockhurst College
1986	Southwest Missouri State University	2000	Central Missouri State University
1987	Truman State University	2001	U. of Missouri-Rolla
1988	Washington University	2002	Truman State University
1989	University of Missouri-Columbia	2003	Washington University
1990	College of the Ozarks	2004	Southeast Missouri State University
1991	University of Missouri-Rolla	2005	Missouri Western State College
1992	Northwest Missouri State University	**2006**	**University of Missouri-Columbia**
1993	Westminster College	2007	College of the Ozarks
1994	Missouri Southern State College	2008	Southwest Missouri State University
1995	Central Missouri State University	2009	Truman State University
1996	Southeast Missouri State University	2010	Central Missouri State University
1997	Missouri Western State College	2011	University of Missouri-St. Louis
1998	Southwest Missouri State University	2012	Northwest Missouri State University

Missouri Collegiate Mathematics Competition

The eleventh Missouri Collegiate Mathematics Competition will be held Thursday, March 30, 2006 and Friday, March 31, 2006 on the campus of the University of Missouri - Columbia in Columbia, Missouri. Any college or university in the state of Missouri can send up to two official teams of 1-3 undergraduates each to compete in the competition. Any number of unofficial teams can participate and compete in the contest just like official teams, although they will be ineligible for first, second, or third place in the team standings. A one-person team will only be allowed in the competition if this person is his or her college's only representative in the competition. A completed registration form for each team must be sent one week before the competition begins. Late registration will be accepted only if there is room for the team in the competition. No calculators or computers or reference material can be used during the competition. The contest will consist of challenging mathematical problems, comparable but not quite as difficult as the Putnam Exam. The Putnam Exam is a national exam sponsored by the MAA and given to outstanding college mathematics students. Previous Putnam Exams can be found in past October issues of the American Mathematical Monthly.

The first session will begin on Thursday evening at 7:30 pm and last until 10 pm and will consist of 5 problems for each team to solve. The second session will begin on Friday morning at 8:30 am and will end at 11 am. It will contain an additional 5 problems. Each problem will be worth 10 points and will be scored by a committee of the MAA Missouri section. The committee consists of the following members: Mangho Ahuja (SEMSU), Jim Bruening (SEMSU), Hang Chen (CMSU), Curtis Cooper (CMSU), Joseph B. Dence (UMSL), Leon Hall (UMR), and Don Vestal (MWSU). Some partial credit may be earned for substantially correct work toward a solution to the problem.

There will be a registration fee of $40 per team. A complementary continental breakfast will precede the Friday morning competition. Each team member and the faculty sponsor are invited to a Friday pizza party at 11:30 am. Each team member is also invited to be a guest at the MAA Missouri Section Banquet on Friday night. At that time, the results of the competition will be announced. A traveling trophy will be awarded to the first place team. In addition, each member of the first place team will receive a plaque. Certificates will also be given to each participant in the competition.

Any questions about the competition can be sent to

Curtis Cooper
Department of Mathematics and Computer Science
Central Missouri State University
Warrensburg, MO 64093
(660) 543-8851
fax: (660) 543-8013
email: cnc8851@cmsu2.cmsu.edu

P.S. The Missouri Collegiate Mathematics Competition home page can be accessed directly with the URL http://www.math-cs.cmsu.edu/~hchen/contest/

CALL   FOR   NOMINATIONS

2006 MISSOURI SECTION AWARD FOR DISTINGUISHED COLLEGE OR UNIVERSITY TEACHING OF MATHEMATICS

Nominations for the 2005 Missouri Section Award for Distinguished College or University Teaching of Mathematics are now being accepted. The award recognizes teachers of mathematics at the post-secondary level who have been widely recognized as extraordinarily successful.

The Section Selection Committee will review all nominations and determine which candidate, if any, best fulfills the guidelines given below. (If no nominated candidate is found to have outstanding qualifications, then the award will not be given.) The Missouri Section awardee will be honored at the Spring 2006 meeting of the Section and will be widely recognized and acknowledged within the Section.

The awardee will also be the official Section candidate for the pool of Section awardees from which the national recipients of the MAA Deborah and Franklin Tepper Haimo Awards for Distinguished College or University Teaching of Mathematics will be selected except that one of the national winners may be selected from another source. There will be at most three national awardees, each of whom will be honored at the national MAA meeting in January 2006 and receive a $1,000 check and a certificate.

Eligibility

Nominees must satisfy the following criteria:

- College or university teachers assigned at least half-time during the academic year to teaching a mathematical science in a public or private college or university (from two-year college teaching through teaching at the Ph.D. level) in the United States or Canada. Those on approved leave (sabbatical or other) during the academic year in which they are nominated qualify if they fulfilled the requirements in the previous year.
- At least five years teaching experience in a mathematical science.
- Membership in the Mathematical Association of America.

Guidelines for Nomination

The nominees should
- be widely recognized as extraordinarily successful in their teaching*
- have teaching effectiveness that can be documented
- have had influence in their teaching beyond their own institutions**
- foster curiosity and generate excitement about mathematics in their students.

*"teaching" is to be interpreted in its broadest sense, not necessarily limited to classroom teaching (it may include activities such as preparing students for mathematical competitions at the college level, for example, the Putnam Prize Competition or the Mathematical Contest in Modeling, or attracting students to become majors in a mathematical science or to become Ph.D. candidates).

**"influence beyond their own institution" can take many forms, including demonstrated lasting impact on alumni, influence on the profession through curricular revisions in college mathematics teaching with national impact, influential innovative books on the teaching of college mathematics, etc.

Procedures

- Nominations must be submitted on the "**Nomination Form**" found on the Missouri Section web page at http://momaa.math.umr.edu/forms/MAATeachAwardForm.pdf Anyone may nominate an eligible candidate, but self-nomination is not permitted.
- Please follow the instructions on the form precisely to assure uniformity in the selection process both at the Section and national levels. If a file on a Section awardee significantly exceeds the prescribed limits (as found at http://momaa.math.umr.edu/forms/teaching_award_guidelines.html), it will not be considered for a national award and will be returned to the Section.
- Nominations for the Missouri Section Award should be sent to Suzanne Tourville at the address below so as to be received no later than **February 1, 2006**. Nominations for candidates who are not members of the Missouri Section should be sent to the Secretary of the nominee's Section.

> Dr. Suzanne Tourville
> Department of Computer & Mathematical Sciences
> Columbia College
> 1001 Rogers Street
> Columbia, MO 65216

HENRY L. ALDER AWARD FOR DISTINGUISHED TEACHING BY A BEGINNING COLLEGE OR UNIVERSITY FACULTY MEMBER

The Henry L. Alder Award for Distinguished Teaching by a Beginning College or University Faculty Member is intended for faculty who hold the Ph.D., have taught full time in a mathematical science in the United States or Canada for at least two, but not more than seven, years since receiving the Ph.D., and who hold membership in the MAA.

Nominees should be recognized as extraordinarily successful in their teaching, have effectiveness in teaching undergraduate mathematics that can be documented, and have had influence in their teaching beyond their own classrooms.

Nominations for the award may be made by any member of the MAA or by any section of the MAA, and must be submitted according to the nomination form to the Secretary of the MAA by December 15. The form and supporting nomination packet information is available on the MAA website under "Alder Award" at http://www.maa.org/Awards/alder.html

Linda Sons (Chair, Alder Award Committee)

FROM THE GOVERNOR

The MAA Board of Governors met August 3, 2005 in Albuquerque, New Mexico.

A motion to dissolve the Committee on Mathematics and the Environment was passed. This committee has never had a policy-making function, and the interests of MAA members formerly served by the committee are being met by the SIGMAA on Environmental Mathematics.

A motion to present a certificate of appreciation to Ed Ahnert of the ExxonMobil Foundation was passed. Under his direction, the Exxon and then the ExxonMobil Educational Foundation embraced the goal of improving U.S. mathematics education from kindergarten through continuing education for teachers and university faculty. Many outstanding MAA programs have been made possible by the support of the ExxonMobil Foundation, including Project NExT, now in its twelfth year.

Future meeting sites were announced. They are:

2006 Joint Meetings	San Antonio, TX
2006 MathFest	Knoxville, TN
2007 Joint Meetings	New Orleans, LA (let's hope!)
2007 MathFest	San Jose, CA
2008 Joint Meetings	San Diego, CA
2008 MathFest	Madison, WI
2009 Joint Meetings	Washington, DC
2010 Joint Meetings	San Francisco, CA
2011 Joint Meetings	New Orleans, LA
2012 Joint Meetings	Boston, MA
2013 Joint Meetings	San Diego, CA

There was a long discussion about meeting sites, and the details necessary to get a meeting scheduled. Both MAA and AMS (for Joint Meetings) and MAA alone (for MathFests) are interested in expanding the possibilities for meeting sites. The Board voted that the Associate Secretary shall report sites being considered to the Board for approval, with both the Assoc. Sec. and the Board keeping in mind the needed lead time for negotiations.

The reports of the Treasurer, the Audit Committee, and the Budget Committee all indicated that the finances of the MAA are in very good order. There is an annual audit by an external auditing firm, and in the report of the 2004 audit, the auditor noted that all concerns from previous years had been satisfactorily addressed and that the improvement in the Association's financial condition that has occurred in recent years has continued. The auditor did not issue a management letter (for the first time in recent memory) to the MAA and at the same time declared the MAA to be a low-risk organization. The Audit Committee recognized the MAA finance team of Sharon Tryon, Director of Finance, Eugene Darrell, Senior Accountant, and Paul Amatie, Senior Staff Accountant for a job well done.

There was continued discussion about the MAA dues structure. The Budget Committee has been looking at dues for some time, and it appears that neither Regular, Discounted, nor Retired members "cover their costs of membership" under the present structure. A detailed proposal for formal consideration by the Board is planned for January 2006. Any new proposal approved by the Board will be phased in over a period of four years.

Project NExT continues to be one of the Association's most successful undertakings. Sponsorship of Project NExT is broadening, and individual sections can now sponsor one or more NExT Fellows, at $2500 per Fellow per year. The MD/DC/VA Section has already done so, and the Metro NY Section plans to sponsor a Fellow next year. Also, about 18 Sections have active Section NExTs (Missouri is not one of these), and the professional development program for new faculty at two-year colleges, Project ACCCESS, continues to develop. Information about Section NExTs and opportunities for funding can be found by following the "Regional NExT" link on the Project NExT webpage (which you can find under "Programs" on www.maa.org). Is someone out there willing to take the lead in establishing a Missouri Section NExT? We all should want to get young faculty involved in MAA, and this is a way to do it.

The U.S. team was second in the 2005 International Mathematics Olympiad, held July 8-19 in Merida, Mexico, behind China, and edging Russia by one point. If you want to participate in any of the exams leading up to the IMO, there are several ways MAA members can become involved with the American Mathematics Competitions. One way is to contribute to the contests as a problem submitter or as an evaluator. Here is a form for potential contributors. The same form together with details about exactly what you would be getting yourself into will be posted on the Missouri Section web page. Another way to help the AMC if you are going to the San Antonio meeting is to help them with a survey aimed at finding out why a high school does or does not participate in AMC exams. This will involve volunteers from sections conducting interviews with people from high schools, and a training session will be held in San Antonio just before the Gibbs Lecture. Think about it, but not too long, and then decide to be a volunteer. More details or directions where to get them, can be found by getting in touch with Elgin Johnston, CAMC Chair, whose various addresses can be found on the "details document" mentioned above on our section's web page.

The 2005 MathFest in Albuquerque was the first one that has been handled completely in-house by the MAA. Everything went smoothly.

A possibility for a sabbatical activity is to be a Visiting Mathematician at MAA. Steve Carlson (Rose Hulman Institute of Technology) did this during the Spring and Summer of 2005 and it was a success both for him and for the MAA. If you are interested in finding out more, get in touch with Michael Pearson in the MAA Washington, DC office.

The 2006 Mathematical Study Tour will be June 6-21 and the destination will be China. More information is on www.maa.org.

I was disappointed that the Missouri Section did not give a Distinguished Teaching Award last year, and therefore we had no nominee for the Haimo Award. This award is named for a member of our section, so let's be sure to have a section nominee this year. I know from experience that getting the package ready does take some time on the part of the person overseeing the nomination, but I also know from experience that the effort is worth it.

Leon Hall
Missouri Section Governor

FROM THE CAMPUSES

Central Missouri State University

New Faculty

Dr. Dustin Jones joined the CMSU faculty in January 2005. He earned his Ph.D. in Mathematics Education from the University of Missouri – Columbia in December 2004. He received his M.S. from Texas A&M University and his B.S. from Southwest Baptist University. At UMC he served as a graduate assistant and instructor. For two years he taught high school mathematics in Plano, Texas. Dr. Jones has received many teaching awards including an Outstanding Teaching Assistant award at Texas A&M, the New Teacher of the Year award at Jasper High School in Plano, and the Outstanding Beginning Teacher award from the Missouri Association of Colleges of Teacher Education. He and his wife Jennifer have a one-year-old son Elijah.

Dr. Nicholas Baeth joined the CMSU faculty in August 2005. He earned his Ph.D. from the University of Nebraska-Lincoln in May 2005 in Commutative Algebra and Decompositions of Modules. He received his M.S. from UNL. He also earned B.S. and B.A. degrees from Pacific Lutheran University. From 2000 – 2005 he was a graduate assistant at UNL. He received several fellowships and assistantships while at UNL. These include the GAANN Fellowship, the UNL Emeritus Faculty Fellowship, and the Scholastic Graduate Research Assistantship. He currently is a Project NExT fellow. He and his wife Katie live in Blue Springs.

Retirement

Dr. Larry Cammack retired May 2005. He joined the Mathematics and Computer Science faculty in 1972 and taught a wide range of courses including calculus, computer science, and modern algebra. He received his bachelor's degree from Phillips University and his M.S. and Ph.D. degrees from Kansas State University. Dr. Cammack was well-known for his excellence in teaching.

(Submitted by Curtis Cooper)

Drury University

Our mathematics and computer science club runs a tutoring service for students at Drury and holds several social events, both on campus and at the homes of the faculty members. The students are participating in several contests in mathematics and in computer science this year.

We have an active undergraduate research program. Our student Anna Madras attended a summer research program. Anna's project is entitled "Randomly Generated Triangles whose Vertices are Vertices of a Regular Polygon." In it, she and her partner studied the behavior of triangles formed by selecting three vertices of a regular polygon. They obtained some nice results on expected perimeter of these triangles. They also showed that, as n goes to infinity, the limits of the formulas for n-sided polygons converge to the similar formulas for circles.

Will Hickman is working with Dr. Scott Simmons on some research which is essentially about understanding DeRham cohomology of certain simple spaces. Nikki Kennedy is working with Dr. Carol Browning to create a visualization of some topological semigroups. We are looking forward to participating in the MAKO undergraduate research conference in November.

Dr. Charles Allen retired this spring. Fortunately for us, he is still teaching part time and participating in research projects. Dr. Keith Coates has joined our faculty. Keith comes to us after working as a scientist at the Space and Naval Warfare Systems Center in San Diego. Prior to that, he built sonar tracking software for a defense contractor, and before that, he was on the mathematics faculty at Illinois Wesleyan University.

(Submitted by Carol Browning)

Missouri Western State University

Don Vestal and Jeff Poet (both of MWSU) had an article, Curious Consequences of a Miscopied Quadratic, appear in the September 2005 College Mathematics Journal.

Thank you to all who attended the Spring Section Meeting at 2005. It was a privilege to be your host and we look forward to a great meeting in Columbia next spring.

Congratulations to Dr. Sharon Vestal and Dr. Michael Ottinger on their recent promotions to associate professors and on getting tenure at Missouri Western.

Congratulations to Dr. Jeff Poet for receiving one of ten Regents Distinguished Professor Awards for 2004-2005.

The Electronic Proceedings of the Missouri MAA 2004 meeting are now available on-line at http://www.missouriwestern.edu/orgs/momaa or you can access the EPMM through the Section website.

The Missouri Western CSMP Department continues to participate in an NSF grant program, under the direction of Dr. Sharon Vestal. The program includes scholarships for qualified students, colloquia, workshops, and an increased intentionality in the individual mentoring of students by faculty. This fall, we begin our fourth semester in the program.

As Pi Day fell during our Spring Break in 2005, the department celebrated (Pi+1) Day in April instead. Is there ever a bad day to have pie?

(Submitted by Jeff Poet)

Southeast Missouri State University

Promotions: Dr. James Bruening and Dr. Tamela Randolph were promoted to the rank of Professor beginning in Fall 2005.

Faculty Searches: The department is seeking to fill two non-tenure positions at the masters level.

Awards: College of Science and Mathematics Teaching Award: Thomas Wencewicz
        College of Science and Mathematics Service Award: Craig Roberts

Conference: Show Me Undergraduate Mathematics Conference, November 5, Cape Girardeau. For full details see Show Me Conference.

(Submitted by Vic Gummersheimer)

University of Missouri – Rolla

New faculty**:** Dr. **Xuerong (Meggie) Wen** joined our Statistics faculty this fall. Meggie received her Ph.D. in Statistics from the University of Minnesota last summer. Also, Dr. **Ilene Morgan** has returned to UMR this fall after being on leave last year, and we are happy to have her back.

Awards**:** Five members of our department will receive Outstanding Teaching Awards for their teaching in 2004-05 - **Tom Akers, Elvan Akin, Martin Bohner, Vy Le,** and **David Leach.**

Two faculty members received UMR Faculty Excellence Awards in 2004-05 - **Martin Bohner** and **Gary Gadbury.**

Promotions: Dr. **Wlodzimierz Charatonik** was promoted to Professor and awarded tenure.

Grants**:** **Elvan Akin** and **Martin Bohner** (UM Res. Bd.), **Miron Bekker** (UM Res. Bd.), **Steve Clark** (NSF), **David Drain** and **V. A. Samaranayake** (USGS), **Gary Gadbury** (2-NSF), **V.A. Samaranayake** (MO DHE)

(Submitted by Leon Hall)

The **MAA Missouri Section Newsletter** is published in October, March, and May each year. Please send any news, comments, questions or corrections to me at **setourville@ccis.edu.**

Thanks.

Suzanne Tourville
Newsletter Editor

MISSOURI SECTION
OF
THE MATHEMATICAL ASSOCIATION OF AMERICA

ABSTRACT FOR CONTRIBUTED PAPERS

Name(s) (* means Speaker): _____

Institution: _____

Address: _____

_____

Phone: (_____)_____

Email: _____

PAPER TITLE: _____

BRIEF ABSTRACT OR DESCRIPTION OF PAPER:

_____

_____

_____

_____

_____

AMS SUBJECT CLASSIFICATION (see Math. Subj. Class.)_____

SPECIAL ACCOMMODATIONS NEEDED (Overhead projector, computer, etc.):

_____

Is the speaker a student? _____
Is the presentation directed toward a student audience? _____

PLEASE RETURN THIS FORM BY **FEBRUARY 1, 2006**, TO:
      Dix Pettey
      Department of Mathematics
      University of Missouri
      Columbia, MO 65211