

MAA Missouri Section Spring 1998 Newsletter

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From the Chair:

Jim Downing SMSU

We at Southwest Missouri State University are looking forward to hosting the joint meeting of the Missouri Section of the MAA and the Missouri Council of Teachers of Mathematics on Friday and Saturday, April 17 and 18, 1998, in Springfield, Missouri. The various sessions and talks should prove to be interesting as well as informative. All sessions will be held in Cheek Hall. The banquet will be in the Crystal Room of Kentwood Hall.

Professor Les Reid of SMSU and NSWC-Dahlgren, will present the Invited Address on Friday afternoon from 1:10 to 1:55 and will be the banquet speaker on Friday evening. Professor Ed Dubinsky of Georgia State University will present the Invited Address on Saturday morning from 10:00 to 11:00 entitled "Learning and Teaching College Mathematics: An MAA Activity of Increasing Importance".

I encourage you to make your reservations and especially your motel arrangements early. Please visit <http://www.smsu.edu/map/index.htm> to locate the maps for our campus.

We anticipate your coming to the meeting in April and expect it will be a rewarding experience. Please visit <http://www.mapquest.com/> to locate maps and directions from your house to Springfield.

Congratulations to Dr. Curtis Cooper

On January 8, 1998, at the Joint Mathematics Meeting in Baltimore, Dr. Cooper was presented the Certificate of Meritorious Service by the Mathematical Association of America.

Since joining the faculty at Central Missouri State University, he has attended every meeting of the Missouri Section as well as the national AMS-MAA joint meetings. Curtis has distinguished himself through many years of continuous and exemplary service to his profession and to the MAA both at the state and national levels. For example, he has just completed a three-year term as Governor of the Section, continues to guide the Missouri MAA Collegiate Mathematics Competition, and is currently managing the Web Page of the Missouri Section. On behalf of the entire Section, thanks for all you have done and continue to do for the organization.

COLLEGIATE MATHEMATICS COMPETITION

The third Missouri MAA Collegiate Mathematics Competition will be held Thursday, April 16, and Friday, April 17, 1998, on the campus of Southwest Missouri State University.

Any college or university in the state of Missouri can send up to two teams of 1 to 3 undergraduates each to compete in the competition. 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, 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 Thursday evening competition will begin at 7:30 pm and last until 10 pm and will consist of 5 problems for each team to solve. The Friday morning competition will begin at 8:30 am and will end at 11 am. It will also 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), Hang Chen (CMSU), Curtis Cooper (CMSU), Joseph Dence (UMSL), Joe Flowers (TSU), Leon Hall (UMR), and Alvin Tinsley (CMSU). Some partial credit may be earned for substantially correct work toward a solution to the problem.

There will be a registration fee of \$25 per team. A complimentary continental breakfast will precede the Friday morning competition. 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, the winning school will receive a plaque. Certificates will also be given to the members of the first place team.

Any questions about the competition can be sent to Curtis Cooper, Department of Mathematics and Computer Science, Central Missouri State University, Warrensburg, MO 64093-5045, (660) 543-8851 email: ccooper@cmsuvmc.cmsu.edu

From the Governor:

Al Tinsley CMSU

The Board of Governors met on Tuesday, January 6 in Baltimore, Maryland. The meeting was fairly routine with few contentious issues.

Donovan Van Osdol, Associate Secretary, reported that the 1997 MathFest in Atlanta was a quality meeting and that the MAA financially broke even. He explained that the process for arranging stand-alone meetings was developed as a result of the Atlanta MathFest and that such a meeting is planned by MAA for 1999. Two sites, one in the Northeast and one in the Northwest are being considered. He added that MAA, AMS and SIAM plan to have a joint celebration in January of 2000, and that AMS is planning a program consisting of plenary sessions only. Finally, he recommended that the 2002 Joint Mathematics Meetings be held in San Diego, CA, January 6-9, and the board gave its approval.

Gerald Porter, Treasurer, reported that MAA investments have shown a 20% increase for the year. Barbara Faires, speaking for the budget committee, requested that the 1999 dues matrix include a 5% increase and the board approved. At the current membership level, each percentage point increase in the dues yields approximately \$20,000.

Caroline Fuchs, Director of Marketing and Membership, stated that the dues increase is necessary for the continuation of MAA's programs including MAA Online which cost \$52,000 last year and for which no funds were budgeted. She reported that MAA currently has 6,600 Regular-1 and 5,500 Regular-2 members and that membership is edging up. Recruitment among those who have not paid membership dues in the last two years has been particularly successful, and new initiatives are being developed.

Marsha Sward, Executive Director, reported that MAA now has 1500 liaisons and the program is "doing great." She added that SIAM has agreed to full reciprocity during the two day overlap of the 1998 summer meetings in Toronto so anyone who has registered for either meeting may attend both.

Don Albers, Associate Executive Director and Director of Publications and Electronic Services, reported that Math Books on Line (MBOL) premiered on MAA Online in mid-August, and that more than 14,000 mathematics books can be found on MBOL. MBOL is being conducted in association with Amazon and the MAA receives a fee for books ordered through MBOL. He mentioned that an electronic version of Math Horizons, similar to Crossroads, an all-electronic student magazine of the Association for Computing Machinery, is being explored. He stated further that all 29 MAA sections have web sites and urged us to visit all but save Northern California for last.

Dick Gibbs, Chair of the CAMC and Walter Mientka, Executive Director of the AMC, reported on contest activity. Participation in the AHSME was up last year, and COMAP has become the 10th sponsor of the AMC. The top 5% of students participating in the USA Talent Search will be invited to participate in the 1998 AIME. It is expected that most of these students will have qualified as a result of achieving a threshold score on the AHSME. Next year the AHSME celebrates its 50th anniversary. The new corporation, IMO 2001, INC, has been set up to organize the IMO to be hosted by the USA in 2001.

Elections included Colin Adams for the 1998-9 Polya Lecturer, Raymond L. Johnson of the University of Maryland College Park as Governor-at-large representing minorities, and Afton H. Cayford of the University of British Columbia as Governor-at-large representing Canadian members.

Roger Horn, Editor of the Monthly, reported that due to action taken by the editorial board, the number of articles published this year will be increased to 67 and the number of pages reduced from 960 to 920. The board approved the appointment of Bonnie Gold to the Board of Associate Editors.

Fernando Gouvea, Webpage Editor, reported that the MAA webpage experienced 24,000 hits per month in 1996 and 104,000 in 1997. He suggested that responses and follow-ups to issues raised in other media be included in MAA Online. He still needs contributors and news.

Kenneth Ross, Chair of the President's Task Force on the NCTM Standards reported that background on the MAA's involvement with the NCTM Standards appear on the committee's website: http://www.maa.org/past/maa_nctm.html. The website includes a discussion of how the Task Force came into existence and its activities. Those who do not have web access should contact Prof. Ross for a complete copy of the website.

Jerry Alexanderson, President of MAA, referred to pictures of the headquarters buildings and Jerry Porter symbolically burned the paid-off mortgage. A bouquet of flowers magically appeared in the plate after the papers were consumed by fire.

Discussions of MathFest 2000 and reduction of the size of the Board of Governors held during

lunch were reported to the complete board in the afternoon session. The sentiment seemed generally against any reduction of the board.

The report of the Committee on Sections included a recommendation to approve changes in the by-laws of the Illinois, Rocky Mountain, and Southeastern sections, and the vote of the board was favorable. John Petro stated that the names of major universities do not appear on the list of liaisons, and he suggested promoting liaison actives at the section levels which would pull the liaisons together. He repeated his request that sections name a liaison coordinator who would facilitate communication between headquarters and the membership.

Martha Siegel, Board Secretary, described the options available for the continuation of the visiting lecturer program. David Stone, Chair of the Committee on Sections, stated that he could pull together the names of section speakers who were listed as good on the sections' evaluations and that the names can be made available on-line. A motion was made to this effect and it passed.

A substitute motion to allow either the chair of the Coordinating Council on Publications or an editor to be appointed to the Executive Committee was accepted by the board, but due to the lack of clarity in the wording, it was tabled until the next meeting. A motion providing that the parts of the by-laws detailing the responsibilities of the Executive Director shall also apply to the Associate Executive Director failed to gain approval.

Project NExT representative, Christine Stephens, reported that seed money is available for the support of NExT-like programs in the sections, and she encouraged sections to submit requests.

Motels in Springfield

When making reservations, mention MAA.

Clarion Hotel 1-4 persons, two beds
\$49.95 plus tax

3333 South Glenstone, Springfield 65804

(417) 883-6550 & 1-800-756-7318

Motel 6 1 person, one bed
\$25.99

2455 North Glenstone, Springfield 2 persons, two beds
\$31.99

(417) 869-4343

Motel 6 1 person, one bed
\$25.99

3114 North Kentwood, Springfield 2 persons, two beds
\$31.99

(417) 833-0880

Econo Lodge 1 person, one bed

\$42.00

2808 North Kansas Expressway, Springfield 65803

(417) 869-5600

Econo Lodge

\$42.00

1 person, one bed

2611 North Glenstone, Springfield 65803

(417) 864-3565

Holiday Inn-University Plaza Hotel

\$69.00

1 person, one bed

333 John Q Hammons Pkwy, Springfield

(417) 864-7333

Super 8 Motel

\$44.99

1-2 persons

3022 North Kentwood Avenue, Springfield 65803

(417) 833-9218

Spring Meeting of the Missouri Section of the MAA

Friday, April 17, 1998

11:00 AM - 4:00 PM

Registration in Cheek Hall

11:30 AM

Executive Committee Meeting

1:00 PM

Welcome By Bruno Schmidt--Academic Vice President

1:10 PM - 2:00 PM

Invited Address by Les Reid-of SMSU and NSWC-Dahlgren

Technology Session: Mediated Learning in Mathematics Courses(time will be given later)

2:00 PM - 3:00 PM

Missouri Undergraduate Faculty Enhancement Reporting

2:00 PM - 5:00 PM

Concurrent Sessions

Banquet will be in the Crystal Room of Kentwood Hall

Les Reid will be the Banquet Speaker

Saturday, April 18, 1998

	6:15 AM - 7:00 AM	5K Run/Walk
	7:30 AM - 8:30 AM	Breakfast: Department Chairs and MAA Representatives
	8:30 AM - 10:00 AM	Registration - Cheek Hall
Session	8:30 AM - 9:30 AM	Missouri Undergraduate Faculty Enhancement Reporting
	8:30 AM - 10:00 AM	Displays & Exhibits
	8:40 AM - 9:35 AM	Concurrent Sessions
	10:00 AM - 11:00 AM	Learning and Teaching College Mathematics: An MAA Activity of Increasing Importance Ed Dubinsky, Georgia State University
	11:00 AM - NOON	Business Meeting

The Third International Derive/TI-92 Conference

<<http://www.math.ohio-state.edu/~waitsb/DRV98/conf.html>> is dedicated to the tradition of master instructors of mathematics sharing their insights on the use of computer algebra in teaching at all levels from middle school (12-14 year olds) through college level. One of the main features of this conference is that it includes teachers from around the world. At the present time there are presentations scheduled from teachers in Australia, Austria, Belgium, Canada, England, Germany, Israel, the Netherlands, Russia, Slovenia, Spain, the United Arab Emirates, the Ukraine, as well throughout the United States.

Please consider attending this marvelous conference in historical Gettysburg, Pennsylvania July 14 - 17, 1998. Let your colleagues know about this opportunity! Registration information and the tentative program are listed at the URL above. (Ed Laughbaum)

Annual MAA Ohio Section Summer Short Course

A Mathematical Sampler: 1699-1900 William Dunham

June 24-26, 1998 Ashland University Ashland, Ohio

This workshop examines a collection of mathematical landmarks from the middle of the seventeenth through the end of the nineteenth centuries. The theorems are the original work of such towering figures as Newton, the Bernoulli brothers, Euler, Gauss, and Cantor and come from the fields of analysis, number theory, algebra, geometry, and the theory of sets. They give historical perspective to topics encountered in college mathematics, and many can be transferred intact to the undergraduate classroom. Most importantly, these theorems represent the beauty and brilliance of mathematics at its best.

The topics to be considered are:

Newton's Method in its original form (1669)

The Bernoulli's' divergence proofs for the harmonic series (1689)

Euler's evaluation of the series $1/k^2$ and related series (1734)

Euler's number theory, especially his work on even perfect numbers (1747)

Euler's clever but flawed attempt to prove the fundamental theorem of algebra (1749)

Gauss' construction of the regular 17-gon (1796)

Pathological functions of Dirichlet (1829), Riemann (1854), and Weierstrass (1872)

Cantor's first proof of the non-denumerability of the continuum (1874)

Volterra's proof that no real function can be continuous precisely on the rationals (1881)

Baire and his "category theorem" (1899).

The workshop meets from 9:00 am - 4:30 pm on Wednesday, June 24 and Thursday, June 25, and from 9:00 am - noon on Friday, June 26. Sessions are informal with discussion encouraged, and problem sets will be provided for possible use in courses elsewhere. Participants will have access to the original papers/books in which these great theorems appear.

Additional details: Contact Dr. Thomas Dence, Dept. of Mathematics and Computer Science

Ashland University, Ashland, Ohio, 44805. (419)-289-5262. Email: tdence@ashland.edu.

http://www.bgsu.edu/departments/math/Ohio-section/short_course.html

The Ohio State University Technology College Short Course Program

The Ohio State University College Short Course Program - part of the Teachers Teaching With Technology Program - has scheduled sixty 1½ to 5-day hand-held technology-based short courses for 1998 at colleges and universities in twenty-three states. Courses of particular interest to math education college faculty, school lead teachers, school math coordinators, and school department chairs are the MTE (mathematics teacher educator) courses. They are designed for collegiate mathematicians and mathematics teacher educators teaching pre-service or in-service high school or middle school teachers. Courses are structured to meet the content and pedagogical needs of middle and high school pre/in-service audiences. Courses are developed around a variety of topic-oriented modules. The middle school modules highlight the use of the Texas Instruments Math Explorer Plus, the TI-83, TI-92, CBL, CBR and Cabri II. The high school modules will use the TI-83, TI-92, CBL, and CBR. If you are interested in attending a course, Program sites are available at: <http://www.math.ohio-state.edu/shortcourse>

Hard copies of the list can be obtained from Bert Waits and Frank Demana through Ed Laughbaum at The Ohio State University, 231 West 18th Avenue, Columbus, OH 43210, or via e-mail at elaughba@math.ohio-state.edu.

The College Short Course Program is endorsed by the American Mathematical Association of Two-Year Colleges (AMATYC) and has offered nearly 100 courses in 27 states in the last 4 years.

1998 Mathematics Awareness Week (MAW98)

Mathematics Awareness Week 1998, April 26-May 2, provides you with an opportunity to organize or sponsor local events celebrating the importance of mathematics. The 1998 theme is Mathematics and Imaging. Mathematics provides the concepts, tools and algorithms that underlie the range of technologies that depend upon the efficient and effective display of images. Pattern recognition in medical diagnosis or automatic identity verification systems, medical tomography, compression of image data transmitted by satellite or data networks, and believable rendering and illumination of characters in animated motion pictures are only some of the modern technologies that depend upon the mathematics of imaging for their success.

If April 26-May 2 doesn't work for you because of exams, spring break, or other commitments, you may schedule MAW98 activities any week in March, April, or May. Here are some suggestions for Mathematics Awareness Week activities:

- Design your own World Wide Web MAW98 page and link it to the national MAW98 page, <http://forum.swarthmore.edu/maw/>. When the MAW98 materials become available in early 1998, they will be posted at this site. Currently, there is an announcement for MAW98 and a wealth of materials from MAW97.
- Encourage your student chapter to organize campus events.
- Explore joint events with colleagues in disciplines such as business administration, operations research, computer science, physics, engineering, and statistics.
- Review the MAA & SIAM Visiting Lecturer Programs for speakers on MAW-related topics, a speakers roster is in development at the AMS (see Web sites).
- Request state or local officials to issue a proclamation declaring April 26-May 2 to be Mathematics Awareness Week in your municipality or state.