



Mathematical Association of America Southwestern Section

Newsletter

Volume 26 Issue 2 | Spring 2013

Section News

MAA's Centennial

At MathFest 2015, in Washington, DC, MAA will be celebrating its 100th birthday. The meeting has been extended by a day to make the event even larger. At this meeting there will be a gala birthday celebration—including an opening procession of the section flags.

The last time section flags were used was at the MAA's 75th birthday, which was before I became active in the Southwestern Section. I was given a box of records, when I became secretary / treasurer, but no section flag.

So—I am asking for help. Does anyone have any idea where our section flag is? I will try to find out the cost of having a new one made before our April Section meeting at NMT in Socorro, NM, but it would be nice to find our original flag. Hopefully some of you will decide to be detectives, and go hunting for it!

Thanks. —*Joanne Peeples, El Paso CC*

Section Book Sale in a Box

The MAA is introducing an alternative way of receiving the section meeting discount on MAA books—even if a member doesn't attend the section meeting. As you probably know there is a 35% discount on books ordered at (or now within one week of) the section meeting.

The Southwestern Section will receive a discount code that can only be used at the online MAA store; it can be used one week before the section meeting until one week after the section meeting. The code will look something like IDS13 and will be posted on the section website. Each section will have a different code. Once you have the code you can go to <http://maa-store.hostedbywebstore.com> and order the books you want (MAA will pay the postage).

You will still be able to order books at the meeting, either at the website using our SW-Section code or by filling out the paper forms (as we have done in the past), and receive your 35% discount.

MAA no longer sells books directly at section meetings, because of the variety of sales tax laws. I will have samples of some of the newly published MAA books for you to look at.

Remember, if you buy books at the section meeting (or online just before or after the meeting) the section receives a commission, so not only are you getting a good deal on some great MAA books you are helping the section. —*Joanne Peeples*

Intel Science Fair Needs Judges

This year, the Intel International Science and Engineering Fair (ISEF) will be held in Phoenix, AZ. This science fair brings together the brightest high-school aged

**Southwestern Section Spring Conference
April 13–14, 2013, Socorro, New Mexico**

More information is on p. 3

students who have created projects in various areas of science, including mathematics.

Judges are needed for all areas of science. Judging will take place at the Phoenix Convention Center starting on the afternoon of Tuesday, May 14 through Wednesday, May 15, 2013. Judges must have a Ph.D., M.D., or equivalent (D.O., Ed.D., D.D.S., D.V.M., etc.) OR a minimum of six years related professional experience beyond receiving their B.A., B.S., or Master's degree.

If you are interested in judging, or if you know of a colleague who is interested, you should check out a video that discusses judging, at:

<http://www.societyforscience.org/isef/judging>

If you wish to become a judge, you can apply online at

<http://apps2.societyforscience.org/isef/judging/>

—Chris Heckman, ASU

MAA National News Board of Governors Report

The Board of Governors met on January 8 at JMM in San Diego. The budget of the MAA continues to generate a great deal of discussion and concern at the Board meetings. The MAA has been running deficits for the last few years and it is projected that this year the deficit will be around \$250,000. Of course the MAA is making every effort to decrease its costs and to increase its revenues. Several changes have been proposed to streamline efforts that might have initial costs but may result in savings in the long run.

Book sales are an important source of revenue and the MAA would like to see more of its members publish their books through the MAA. A discussion point for

the last couple of board meetings concerned the opportunity for MAA books to be used in classrooms. I encourage our members to view the list of MAA publications to see if there is a book there that would serve your teaching needs. Increasing the sale of MAA books would help the bottom line.

The leadership of the MAA has proposed a change to the dues structure. Currently there are many different categories of dues paying members (more than forty). The Board approved a proposal to greatly decrease the number of such categories to about four. These new categories will incorporate the availability of electronic versions of the standard MAA publications sent to members. Decreasing the paper publications costs will decrease expenditures. The details of these changes will appear soon.

Increasing membership in the MAA would of course help in maintaining a healthy organization. I am surprised how few of our colleagues are members of the MAA. I would encourage all of you to think of ways of increasing membership in the MAA. I would like to mention one new initiative that I just started this semester. Whenever one of our undergraduates is recognized with a scholarship or some departmental award (e.g., outstanding

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Section web site:

<http://maa.org/Southwestern>

MAA Southwestern Section Meeting in Spring 2013

The annual meeting of the Southwestern section of the MAA, held jointly with the annual meeting of the New Mexico Mathematical Association of Two-Year Colleges, will be happening Saturday–Sunday, 13–14 April 2013 on the New Mexico Tech campus in Socorro.

There will be student sessions, talks on issues like on-line education and dual enrollment, a Chairs' Roundtable and more.

Dr. Brigitte Russell, Policy Director for the New Mexico Higher Education Department will be speaking. Also, we will be having as an invited speaker Professor Bob Devaney, who is President of the MAA, a well-known expert in Chaos and Fractals, and a very engaging speaker!

For more information, including special conference hotel rates and further developments check out our webpage at

<http://infohost.nmt.edu/~wdstone/2013MAA-NMATYCmeeting.htm>

You can also contact the organizers:

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senior) the department will pay for student membership in a mathematics organization, like the MAA or AMS. I believe that encouraging undergraduates to become members of the MAA will encourage them think of continuing that membership as they progress through their careers.

This activity is much in keeping with the philosophy that my department has in working with its undergraduates. By the time the student has graduated with a degree in mathematics, they should have behaved as mathematicians. They should have learned a considerable amount of mathematics, had the opportunity to communicate that mathematics to others, and had the opportunity to utilize their mathematical knowledge to either carry out mathematical research or apply it to some areas outside of mathematics. Part of being a mathematician is belonging to mathematical organizations.

Aside: The JMM was most entertaining. I want to mention just one activity. Dartmouth showed a video that it created called Darwin's Extra Sense,

<http://www.math.dartmouth.edu/publicity/general/extrasense/>

This video is about the application of mathematics to biological processes. I found it very motivating and I recommend this video to your students. I believe it would motivate them to include more mathematics in their program of study.

—William Yslas Vélez, UA

Department News

Northern Arizona University

The Northern Arizona University Department of Mathematics and Statistics is now offering a Master of Science degree in Mathematics Education, in addition to our MS in Mathematics and MS in Statistics degrees. The MS in Mathematics Education program is designed for continuing teachers and is aligned with the Advanced Program Standards of the National Council of Mathematics Teachers and National Council for Accreditation of Teacher Education. The program emphasizes the connections between 7th–16th grade mathematics content,

standards-based pedagogy, and reflective practice and is available in Flagstaff or via online distance courses. The degree is a modification of our previous Master of Arts in Teaching degree.

Among grant projects underway in the department are several funded by the Arizona Board of Education and the Arizona Board of Regents supporting the Intel Math program through which several of our faculty members provide workshops enhancing the mathematical background of K–8 teachers in four Arizona counties. —*John Hagood*

Glendale Community College

GCC is hiring two new math faculty this spring, which will bring our number of full-time math faculty to 36.

Districtwide, Maricopa is working redesigning Arithmetic Review and Beginning Algebra. We are changing the structure to seven one-credit hour modules and changing the emphasis to reflect the common core (the new K–12 curriculum). We plan for these to come online Fall 2014. These are non-transfer courses.

—*Anne Dudley*

University of New Mexico

The new MaLL: Math Learning Lab, opened January 2013 in Centennial Library at the University of New Mexico. The MaLL is serving over 900 students in Pre-calculus math. It offers the students the opportunity to learn at their own pace. This initiative was carefully researched by a group of faculty, and students from the department: Dr. Tamra Mason (Lecturer), Martha Byrne (graduate student), and Professors Kristin Umland and Monika Nitsche. Its implementation was greatly accelerated by the arrival of the new UNM President Robert Frank, the steady support of our own Chair Terry Loring, and the

Dean of A&S Mark Peceny. In record time the Lab was built and is now functioning under the careful watch of Lecturer Jenny Ross.

UNM-PNM Math Contest: On February 2, 2013, the Department hosted the Second Round of the UNM-PNM Statewide Mathematics Contest. Students and teachers were treated in the morning to a lecture on “Why Math Competitions?” by Prof. Titu Andreescu from University of Texas Dallas. In the afternoon over 170 students from all over New Mexico took the three hour final test. The New Mexico Mathematics Contest was born the year before the first Super Bowl in 1966, and this is the 45th edition. Professors Janet Vassilev and Dimiter Vassilev have co-organized the contest for the last five years. You can find more information at the contest web page:

<http://mathcontest.unm.edu/>

SUnMaRC Conference: On March 1–3, 2013, the Department of Mathematics and Statistics at the University of New Mexico is proud to host the 10th Southwest Undergraduate Mathematics Research Conference (SUnMaRC). Undergraduate students at UNM and at any institution in the Southwest, interested in mathematics and applications are invited to participate at this upcoming conference. This conference will give you the opportunity to meet other students with similar interests, listen to other student talks and invited talks, give a talk or poster if interested, network with students and faculty at several institutions in the SW, and share a supportive, energetic and fun environment. This conference is organized by UNMs Math & Stats Club (president: Andrew Herring herring@unm.edu) and Professor Monika Nitsche (nitsche@math.unm.edu). Please contact

either of them for more information or check the conference website:

<http://www.math.unm.edu/~nitsche/sunmarc/2013/>

Math Teachers Circle: The activities of the Albuquerque Math Teachers' Circle continue with three lectures scheduled for the Spring Semester. The Albuquerque Math Teachers' Circle supports local teachers who desire to explore mathematical ideas in a fun, encouraging environment. Our meetings provide an opportunity for participants to work on interesting problems, developing their mathematical knowledge, skills, and intuition, with the support of leading mathematicians and scientists from the local community. The Math Teachers' Circle was initiated by Prof. Michael Nakamaye three years ago, and is only growing stronger in terms of participants and external funding. More information on the Circle's web page:

<http://www.unm.edu/~mathtc/index.php>

Summer Math Camp: The Department is getting ready to host the fifth NSF sponsored MCTP Summer Math Camp during the month of July. This program is designed to introduce undergraduate students to important ideas in both pure and applied mathematics, and also includes a focus on education. This year, the Math Camp consists of 4 week-long minicourses on the areas of mathematical modeling, fluid dynamics, matrix analysis and mathematics education. One week will be devoted to each topic with a two-day break for field trips. Here we visit some of our national laboratories and institutes, and explore New Mexico. Participating students are supported with a stipend, per diem, and travel support and lodging for

non-locals. For more information check the MCTP Summer web page:

<http://www.math.unm.edu/mctp/summer/>

REUs: Through the NSF-MCTP grant, we have funding to support several undergraduate Honors research projects. Currently 8 students are working on various projects. See the web page for more information:

<http://www.math.unm.edu/mctp/reus/>

Commencement Speaker: Professor Michel Lapidus from University of California at Irvine has graciously agreed to deliver a talk in our graduation ceremony in May 2013.

Interviews / new faculty: We are interviewing for two positions in Applied Mathematics, one in Statistics and one MCTP Postdoctoral position. Last year we hired two operator theory / analysis tenure track faculty: Dr. Anna Skripka and Dr. Maxim Zinchenko who joined UNM in Fall 2012. We also hired senior Statistician, Prof. Hedibert Lopes from The University of Chicago Booth School of Business, he will join the Department in Fall 2013. Statistics Professor Gabriel Huerta returned in January to UNM after a year and a half leave to Indiana University, he came back with Postdoctoral fellow Alvaro Nosedal-Sanchez. —*Cristina Pereyra*



The Canoe Problem at the 2012 Section Meeting.