



Spring 2012 Newsletter

Section Website <http://sections.maa.org/rockymt>

Spring 2012 Newsletter in PDF Format for Printing

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2011 - 2012 Section Officers and Committee Members

Section Website <http://sections.maa.org/rockymt>

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2013 Distinguished Teaching Award Call for Nominations

Each year, the section recognizes one outstanding teacher of collegiate mathematics with an award named in honor of Burton W. Jones, a lifelong advocate of excellence in teaching at all levels. In addition to an honorarium, a certificate and an invitation to deliver the opening lecture at the next Section Meeting, the recipient is eligible to be the section's nominee for the Deborah and Franklin Haimo Awards for Distinguished College or University Teaching of Mathematics. These national awardees (at most three) are honored at the MAA winter meeting with a certificate and \$1000 check. All nominators also receive a certificate of in recognition of their efforts to support the section mission of promoting excellence in teaching; nominators and nominees both receive free meeting registration at the next section meeting. To begin the nomination process for an outstanding teacher that you know, simply submit the **one-page nomination form** (available at our website: <http://www-math.cudenver.edu/~maa-rm> and in this newsletter) by **1 December 2012**. **Complete nomination materials** (described on the website) are due **15 January 2013**.

Chair's Report

I was privileged to attend some of the Joint Mathematics Meetings in Boston, MA in January. The meeting facilities were very impressive and, except for a little cold on the first day, the weather cooperated quite well. It was great to see a few members of the Rocky Mountain Section actively involved with various aspects of the meetings. I was not able to attend the MAA Prize Session at the meetings, so I will take a moment here to congratulate **Hortensia Soto-Johnson** of the University of Northern Colorado on receiving an MAA Certificate for Meritorious Service at the Joint Meetings. I am sure **Mike Brilleslyper's** Governor's Report will contain a wealth of information about what is happening at the national level so I encourage you to read his report. In this report I will

mention a few items discussed at the Section Officer's Meeting in Boston that are relevant to the members of the section.

1. **Webpage for Sections:** The Section Officer's page on the MAA website (www.maa.org) has undergone significant changes recently with the goal of making all information available within "3 clicks". Although this may be of most interest to officers or to those of you who will become section officers in the next few years, there are also resources on this site that could be of interest to other members. In particular, there is a place for sections to post resources for sharing with other sections. This page will include unedited postings from other sections on what is happening in their section. This is intended to be more concise and informative than simply a meeting report and will give sections a place to share ideas on everything from student activities and conferences to membership recruitment ideas, membership retreats/workshops, etc. I encourage you to check out this website and as it evolves you may see something you would like to try in the Rocky Mountain Section or you may have something you want to post about what is happening in our section.
2. **Email Updates:** After some technical difficulties this fall, the MAA is asking all members to re-enroll to receive emails from the MAA - assuming you indeed are interested in receiving email from the MAA. If you have not received emails from the MAA recently, you need to go to the MAA website (www.maa.org) and click the link to be added to their email list. This is particularly important if you are an MAA liaison!
3. **Section highlights:** During the Section Officer's Meeting, five sections were given an opportunity to talk for a few minutes about something interesting that is happening in their section. These ranged from items we already do in the RMS, like workshops, etc., to other ideas like Math Wrangles for students (similar, but different, than math competition) and week-long summer sessions that involve activities for families. I can provide more information on these if anyone is interested in them. The Rocky Mountain Section may be asked to present an idea at a future Section Officer's Meeting. Although I think we have plenty to share, if

something we are doing in the Rocky Mountain Section stands out to you as something we should talk about, please share your thoughts with me or anyone on the Executive Committee.

4. **Haimo Awards:** The criteria for the Haimo Awards have been changed so the annual section teaching awards are not closely linked to these awards. Two of the Haimo Award winners still need to be section award winners; however, they do not need to be from the current year. This allows sections to set their own criteria for section award winners and allows a section to give its winner in year N a long time to prepare a Haimo nomination packet for year N+1.
5. **Centennial:** MAA sections are asked to write or update a section history as we look ahead to celebrating the MAA's Centennial in 2015. If you have been a part of the Rocky Mountain Section for many years and you have an interest in being involved in such a project, please let me know. We are also asked to consider displaying framed copies of historical documents and photographs at our section meeting in Spring 2015.
6. **Travel Funding:** As some of you may know, the section representative (typically the section chair for the Rocky Mountain Section) that participates in the Section Officer's Meeting at MathFest has received up to \$600 travel support from the national MAA office in the past. However, this funding was not available for MathFest last year in Pittsburgh and it was announced at the Section Officer's Meeting in Boston that this travel money will again not be available for MathFest this year in Madison. Furthermore, such level of travel funding at future MathFests is not a possibility. As such, the MAA is asking sections to provide some level of support for the section representative to attend MathFest in Madison and is looking for a long term solution. The MAA is looking for a solution that includes the concept of a partnership between the MAA and the sections where the MAA and the section can share some responsibility for providing travel support and where the sections have some ownership, so to speak, in the Section Officer's Meetings. As everyone knows, traveling to the national meetings can be expensive and is a significant commitment by the officer(s). I am in support of the

section providing some type of matching support to the section representative if funds are available. The RMS Executive Committee will be having discussions on this matter over the next few months so if you have any thoughts or ideas on this, please let us know.

The Spring 2012 meeting will be held on the Auraria Campus in downtown Denver on April 13th and 14th and will be co-hosted by Metropolitan State College of Denver, the University of Colorado Denver, and the Community College of Denver. Program co-chairs: **Shahar Boneh** (MSCD), **John Ethier** (MSCD), **William Cherowitzo** (UCD) and **Jean Hindie** (CCD) are putting together what is sure to be a great meeting. We are fortunate to be in the first group of sections to participate in the MAA's new Editor Lecture Series. **Walter Stromquist**, editor of *Mathematics Magazine*, will be our guest and will give a lecture at our Spring 2012 section meeting. **Doug Ensley**, MAA Second Vice-President, will be our visitor from national under the MAA Section Visitor Program. We look forward to having these two excellent speakers participate in our section meeting!

I have very much enjoyed representing the Rocky Mountain Section at the national meetings and working with such a great group of people on the Executive Committee. It is hard to believe that this will be my last report. Chair-Elect **Bill Cherowitzo** from the University of Colorado Denver will do a great job of leading the section and I look forward to working with him next year as I serve one more year on the Executive Committee.

Respectfully submitted,
Daluss Siewert, BHSU
Chair, Rocky Mountain Section

Attention Putnam Coordinators

Putnam coordinators at the participating schools please send Dick Gibbs at gibbs_d@fortlewis.edu the top three scores and their team score. No names are requested at this time. When we know the top three scores and the top team score we will contact the schools for the names.

Governor's Report

I just returned from 2012 Joint Mathematics Meetings in Boston, an obvious choice for a winter time meeting. Despite the cold wind off the Charles River, the city was a charming host for the meeting. With three hotels and the convention center spread out at the extremes of many high-end shops and restaurants, the mathematicians were forced to walk repeatedly passed Tiffany's, Gucci, Coach, and Christian Dior. While I did not see many of our colleagues perusing the merchandise, the Starbucks and numerous Dunkin Donuts seemed to be making a killing. I guess you cannot turn diamonds and fine leather into theorems, but coffee and sugar are another story.

As usual, it was wonderful to meet up with old friends and trade stories of life in the mathematical trenches. It is also encouraging to see the strong Project NExT presence among the leadership of the MAA. The program is now in its 18th season and numbers well over 1000 Fellows.

The Board of Governor's meeting covered a lot of ground and there were several new faces in key positions. I will summarize the points that may be of interest to members of the section.

This year's JMM was the largest ever! Even in a weak economy, the mathematics community has a strong desire to come together to share ideas and learn from each other.

New MAA Treasury, **Jim Daniels**, reported that the MAA has contracted TIAA Trust Company to manage its funds. Several companies were carefully considered before a decision was made. While the overall financial health of the MAA is sound, it was reported that the reserve funds are dangerously low. This situation resulted from several consecutive years of running operating deficits. It is imperative that the MAA cut expenses and start re-building an adequate reserve fund. The impact of these cuts is not entirely clear, but they will affect items such as travel funding for section officers.

Associate Treasurer, **Rick Cleary**, reported the MAA will be very close to the predicted 2011 deficit in the operating budget. He reiterated the need to cut expenses. He noted that for 2013, student dues will increase from \$30 to \$32 and regular dues will increase by \$5. E-memberships

are \$5 less than regular memberships. Despite the small increase in student membership costs, graduate students are paying less than they did a few years ago.

In a very interesting report, **Betty Mayfield**, gave the results of a task force on the representation of women mathematicians in winning prizes and awards. In general, women are not well represented in these areas, despite making up 25% of the MAA. The task force investigated the potential role of implicit bias in contributing to this situation. Recommendations have been made to the committee on awards and prizes to adopt best practices that avoid bias and hopefully increase fairness so that decisions are not made with unintentional implicit bias.

One example of this involves the Putnam exam which awards a prize for the best score by a female student. Women wishing to be considered for the prize must place a red dot on their exam to identify their gender. Practices such as this may have unintended negative consequences on the performance of the female participants. A more thorough explanation of implicit bias may be found at www.awis.org/awards/.

David Bressoud, past president of the MAA, reported that the MAA and the NCTM are drafting a joint position statement on calculus courses at the college level. In 1986, both organizations stated that high schools should not cut corners in algebra and trigonometry in a rush to get to calculus. It seems this message was not heeded as recent studies show 60% of college calculus students report having taken a prior calculus course of some type. Even more troubling is that 1 out of 6 students who took calculus in high school were enrolled in a remedial mathematics course in college. It is clear that colleges and universities must re-think first year calculus in light of these statistics. The joint statement is a step towards providing some guidance for the design of these courses. The statement, if approved, should be aligned with the new common core standards and with the MAA curriculum guidelines (currently being revised).

The strategic planning group on SIGMAAs presented their recommendations on how SIGMAAs should function within the MAA. The task force made seven over-arching recommendations. In brief, they noted that SIGMAAs are important in the MAA; they

establish sub-communities of people with a common interest. SIGMAAs allow the MAA to reach out to people who may not feel fully vested in what the MAA offers. Thus, SIGMAAs reach into other scientific communities and organizations. It is recommended that e-communities be created for groups that cannot take on the burden of a full SIGMAA structure or for SIGMAAs that are organizationally challenged. The name ENIGMAA has been suggested for these groups. The MAA should consider SIGMAA-only memberships for people in other organizations who may not want full MAA memberships. How SIGMAAs fit into the overall MAA governance structure needs to be clarified. The BoG voted on four specific recommendations to include a mission statement, procedures for setting a SIGMAA budget, a review cycle for the MAA to evaluate SIGMAAs, and to make the Committee on SIGMAAs part of the Council on Members and Communities.

And now a collection of short, unrelated items:

The MAA continues to be the largest provider of mathematics competitions. The most recent AMC8 competition had over 150000 students at over 2000 schools representing over 30 countries.

For 2011, the general gift fund of the MAA received a record amount of over \$164,000 with an average gift size of \$193. Remember that gifts to the MAA are tax deductible.

Over 5000 MAA members converted their memberships to e-memberships.

The Euler prize award is being increased from \$1000 to \$2000. This is made possible by a gift from Mrs. **Virginia Halmos**.

The Dolciani Foundation has been a generous supporter of Project NExT and will expand their support of from 20 to 30 Fellows for the next three years. In addition they want to fund a significant prize for a research mathematician that has made lasting and significant contributions to K12 education. It is hoped that the first prize can be awarded at Mathfest, 2012. The short timeline presents some challenges that the MAA staff is working through.

David Bressoud is ending his term as past president and is being replaced on the executive committee by in-coming president-elect, **Bob Devaney**.

Finally, this was **Michael Pearson's** first JMM at the helm of the MAA. He has a clear vision for the MAA as the organization continues to evolve in providing excellent resources, opportunities, and publications to the mathematics community. Michael understands the strength of the MAA is due to its members. He has a great deal of respect for all the people that volunteer and for all the activities and work that occur in the sections.

For me, perhaps the best part of this year's JMM is that now when asked, "Did you go to Harvard?" I can reply, "Why yes, yes I did." My kids even have the T-shirts to prove it.

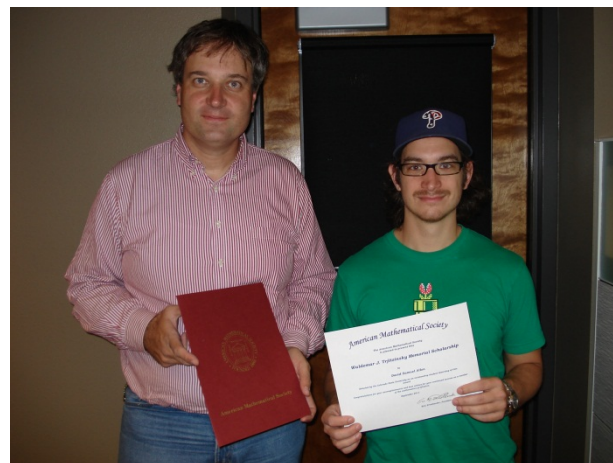
I hope to see everyone this spring at our section meeting on April 13 – 14. Denver should be a fun and convenient location. Please consider giving a talk and bringing your students.

Respectfully submitted,
Mike Brilleslyper, USAFA
Governor, Rocky Mountain Section

Section News

Colorado State University

Undergraduate **David Allen** was one of seven undergraduate students to receive the 2011 Trjitzinsky Award from the AMS. Each recipient received \$3000.



David came to pursue his bachelor's degree in mathematics via a circuitous route. After high school in Philadelphia, where he focused on art, Allen cofounded TDI Productions, a video production company. After working in the field for some time, he enrolled as a biology major at

Bucks County Community College. It was there that he caught up on mathematics he had missed during his arts-driven high school years, and was inspired to change his major to mathematics. He earned his associate's degree, and is now completing his bachelor's degree in general mathematics at Colorado State University. He plans to pursue graduate studies so that he may work in academia, impacting students in same positive way his mentors have influenced him at CSU.

Metropolitan State College of Denver

Our college name change to: Metropolitan State University of Denver is currently working its way through the state legislature. It is anticipated that the name change will be in effect in fall 2012. Our college has recently begun to offer graduate degrees and the name change is reflective of our new mission.

We've had some exciting news recently – Our calculus program has been identified by the MAA as being one of the top 15 of over 200 colleges and universities surveyed nationwide.

In the fall of 2010, the MAA surveyed over 200 colleges and universities across the U.S., including almost 700 instructors and 14,000 students. Student surveys were conducted at both the start and end of the term. The MAA was looking for factors that improved five measures: 1) passing rate, 2) interest in continuing on to calculus II, 3) general interest in continuing to pursue mathematics, 4) enjoyment of mathematics, and 5) confidence in mathematical ability. The study controlled for a number of variables including gender, race/ethnicity, socio-economic status, previous mathematics courses and performance in those courses, SAT/ACT scores, year in college, intended major, and student attitudes and intentions at the time that they began the Calculus I course.

The MAA will be sending a case study team of three people, headed by **Sean Larsen** of Portland State University, to visit our campus in fall 2012.

University of Colorado at Boulder

In Fall 2011, the Department awarded the inaugural 'Frank F. Islam Scholarship in memory of Wolfgang Thron' to our undergraduate math major **Daniel Bragg**, and the inaugural 'Frank F. Islam Scholarship in honor of Frank F. Islam Scholarship in honor of William B. Jones' to our graduate student **Ryan Rosenbaum**. CU alum

and noted entrepreneur Mr. **Frank F. Islam** endowed the scholarships in honor of these professors who had a direct impact on his life and success, and they are meant to be awarded annually to provide financial support for outstanding upper-division undergraduate Mathematics major or graduate students in the Department of Mathematics demonstrating excellence in their studies

As far as faculty achievements go, in Fall 2011, Dr. **Markus Pflaum** was awarded a three-year NSF grant for his project titled 'Noncommutative Invariants of Singularities and Application to Index Theory'. Dr. **Brian Rider** has been named a Simons Fellow by the Simons Foundation for the 2012-2013 academic year. The Simons Fellows Program provides funds to faculty for up to a semester long research leave from classroom teaching and administrative obligations. Awards are based on the applicant's scientific accomplishment in the five-year period preceding the application and on a judgment of the potential scientific impact of the leave period. Dr. Rider has also been given designated a 'College Scholar' by the College of Arts and Sciences of the University of Colorado, Boulder for the same time period.

University of Northern Colorado

In faculty news, **Hortensia Soto-Johnson** is on sabbatical leave for the spring semester.

An undergraduate UNC math major, **Jeremy Garcia**, is attending "Math in Moscow," a 15-week program at the Independent University of Moscow, a small, prestigious Russian university for future research mathematicians. Jeremy received an award from the AMS in order to attend this program.

The 20th Annual UNC Math Contest for students in grades 7-12 had approximately 2000 participants. The first round was delivered on-line in November 2011 and provided students throughout the state the opportunity to participate. The top 200 students were invited to campus for the final round on January 21, 2012. The top 25 winners will be honored, along with their parents, at a banquet at UNC on April 15th hosted by the new director of the Math Contest, **Ricardo Diaz**.

The Northern Colorado Math Teachers' Circle is planning to offer a residential summer immersion institute from June 25-29, 2012. The institute is being organized by **Cathleen Craviotto** and **Gulden Karakok** and three

northern Colorado teachers, **Bonnie Funk**, **Delia Haefeli**, and **Julie Samsel**. More information can be found at <http://www.unco.edu/NHS/mathsci/mtc/>.

A Message from your MAA Higher Ed Liaison to the CCTM

Is news from your school missing?

Send your news to your department liaison now with a request to forward it to the Linda Sundbye, Newsletter Editor for inclusion in the next issue. sundbyel@mscd.edu

8th Annual SIAM Front Range Conference at the University of Colorado Denver Saturday, March 3, 2012

On March 3, 2012 we will be holding the 2012 SIAM Front Range Student Conference at the University of Colorado Denver.

Undergraduate and graduate students are encouraged to participate by giving 20 minute talks on a class project or research project related to applied mathematics. Or please come and listen and learn about all the great projects that are being done at many of the front range schools. The plenary speaker will be **Michael Waterman** of the University of Southern California and he will speak on Eulerian Graphs and Reading DNA sequences. Abstract deadline is February 24, 2012. For more information, please see

<http://amath.colorado.edu/cmsms/index.php?page=conference>.

Sponsored by the University of Colorado Boulder/ Colorado Springs/ Denver, Colorado School of Mines, and Colorado State University.

Lynn Bennethum, UC-Denver

MAA PREP Workshops 2012

Registration is now open for the MAA's 2012 series of Professional Enhancement Program (PREP) workshops. There are both online workshop and onsite workshops. For more information, visit: <http://www.maa.org/prep/>

Colorado Council of Teachers of Mathematics (CCTM) continues to provide great opportunities for both pre- and in-service teachers! Here are some important headlines from CCTM:

1) Colorado Council of Teachers of Mathematics (CCTM) in cooperation with Colorado Department of Education continues to present regional workshops to support teachers adapting the new Colorado Academic Standards (CAS). The next workshop series will be held in early spring, and focus on addition and subtraction of whole numbers to complex numbers and will provide implementation strategies. More specifically the following key questions will be addressed: *How does student understanding of addition and subtraction build over time in the CAS? What representations will support students in addition and subtraction? How do these strategies generalize?* Dates of the workshop for each region and workshop registration information can be found at CCTM website: www.cctmath.org

2) CCTM 2011 Conference- *Setting the New Standard for Mathematics Teaching and Learning* was held at the Denver Merchandise Mart on October 27-28, 2011. The keynote speaker Dr. Phil Daro's presentation, *Mathematics Common Core State Standards*, can be found on CCTM website. CCTM members can also find Dr. Margaret Smith's talk under member's only section.

3) CCTM will help host the NCTM national conference in Denver on April 17-20, 2013 titled *Reasoning and Proof: Is it true? Convince me!* CCTM will need volunteers to help with this great event! **This is a great opportunity for pre-service teachers to volunteer and learn more about CCTM and NCTM. For more information on volunteering please check CCTM website.** The deadline to submit a proposal for the conference is Eastern Standard Time on May 1, 2012. For more information on submission check NCTM website for conferences.

Gulden Karakok, UNC

Note from Hortensia Soto-Johnson, MAA Meritorious Service Award Recipient

It is a great honor to receive the MAA Meritorious Service Award. As a Project NExT Fellow, I learned the value of saying yes to the MAA, both at the National level and Section level. I am fortunate to be in a section that encourages participation from novice and seasoned professors at two-year institutions to research institutions. It has been and continues to be a joy to serve the MAA, to learn from past leaders, to serve as a role model to others, but the most rewarding part is transforming working relationships into life-long friendships. Thank you to the Rocky Mountain Section Nominating Committee for recommending me for this award.

Sincerely,

Hortensia Soto-Johnson, UNC

17th Colorado Mathematics Awards Ceremony/Reception

Plans are under way for the 17th Colorado Mathematics Awards Ceremony and Reception to be held on Tuesday, May 22 at the Grant - Humphreys Mansion in Denver. At the school level we'll be recognizing the top ten participants on MATHCOUNTS, the AMC 8, 10, and 12 contests, and outstanding members of the Colorado American Regions Mathematics League team. At the collegiate level we'll be recognizing the top three Putnam scorers and the top team(s) on the Mathematical Contest in Modeling.

We are always looking for sponsors, and are appreciative of the support that the Rocky Mountain Section has provided over the years for this event.

If you have any suggestions for possible sources of funding, please contact me at gibbs_d@fortlewis.edu.

Thank you,

Dick Gibbs, Co-Chair

**Colorado Mathematics Awards
Steering Committee**

**Emeritus Professor of Mathematics
Fort Lewis College**

Mathematics Awareness Month: Mathematics, Statistics, and the Data Deluge April 2012

The American Mathematical Society, the American Statistical Association, the Mathematical Association of America, and the Society for Industrial and Applied Mathematics announce that the theme for Mathematics Awareness Month, April 2012, is **Mathematics, Statistics, and the Data Deluge**.

Massive amounts of data are collected every day, often from services we use regularly, but never think about. Scientific data comes in massive amounts from sensor networks, astronomical instruments, biometric devices, etc., and needs to be sorted out and understood. Personal data from our Google searches, our Facebook or Twitter activities, our credit card purchases, our travel habits, and so on, are being mined to provide information and insight. These data sets provide great opportunities, and pose dangers as well.

Math Awareness Month is held each year in April. Initiated in 1986 to increase public understanding of, and appreciation for, mathematics, this annual event highlights the relevance of mathematics to a particular area of scientific endeavor.

For more information, visit:

<http://www.mathaware.org> .

MAA 2012 Study Tour to Italy

Join MAA members for a tour that explores Italy's mathematical history and meet its present-day rising stars in the fields of mathematics and science. Visit Turin, Bologna, Florence and Rome, June 9-22, 2012. Registration deadline: March 9, 2012. For more information and pricing, visit:

<http://www.maa.org/studytour/>

or call Academic Travel Abroad, Inc. at 1-800-556-7896 or contact Grace Cunningham at

gcunningham@maa.org.

NCTM Mathematics Teacher

I am the department liaison for the department Connecting Research to Teaching for the Mathematics Teacher, published by the NCTM and we are soliciting manuscripts. You can find more about this department at:

<http://www.nctm.org/resources/content.aspx?id=9290>

or feel free to contact me at:

hortensia.soto@unco.edu.

If you have done something in your classroom that is research-based, then please consider submitting a manuscript. The manuscript should be accessible to someone (not necessarily everyone) in the 8-14 grade range.

Hortensia Soto-Johnson, (UNC)

Section Nominating Committee Report

There is just one election to conduct this year and it is for Section Vice-Chair. The position of Vice-Chair must be filled by a person associated with a two-year college. The Nominating Committee is pleased to nominate Sue Norris from Northwest College in Wyoming for this position. Sue's biography can be found below. Any other parties interested in running for this position should contact the nominating committee chair Cathy Bonan-Hamada at cbonan@coloradomesa.edu. The election will take place at the annual meeting in April.

Cathy Bonan-Hamada
Colorado Mesa University

Sue Norris
Northwest College
Powell, Wyoming

I am Sue Norris, running for Vice Chair. Since I am an old (you can read that experienced if you like) Math teacher, I am going to run this bio backwards in the fashion of , "what have you done lately." Currently I am at Northwest College as a tenure track math/stats teacher all levels (WenVideo Calculus, online Statistics designed and taught, presented "Use of Statistical

Projects" at last WYMATYC Articulation, back up advisor Phi Theta Kappa), this also includes statistical analysis design work on many projects (Bridge/Transition Math, Assessment Accreditation, Strategic Plan, Artificial compared to Organic Intelligence in the Algebras). I have several credits (little over half) toward a PhD through Walden University in Education, but discontinued that to focus on teaching and research activities at Northwest and the region. Previous to Northwest College, I taught tenure track Developmental Math at Wenatchee Valley WA, and co-advised the Phi Theta Kappa Chapter for two years. My community college teaching began in Port Angeles, WA where I was employed for 25 years at Peninsula College. During this time I completed my Master's degree in Statistics, University of Idaho (published in Northwest Science Notes for lightning prediction model, statistical consulting business with too many projects to mention). My first 20 years were as a non-tenure track mathematics teacher and the later five as Institutional Research and accreditation report writer (ok I know I went to the dark side for a while but left when they wouldn't return me to teaching). I was involved at the state level in Washington on the executive board of the Transitions Math Project, WAMATYC (many presentations and conference planning), and won a Best Practice for Applied Math program (travelled around the state helping other colleges deal with the new math requirements for graduation). I taught high school for 7 years. My Bachelor's degrees are in Mathematics, Physical Science and Education with minors in Chemistry, Biology, Computer Science, and Psychology from Washington State University. The old quote goes, "If you want something done give it to a busy person." I like to keep busy and would enjoy being busy as a contact between RMS-MAA and the two year colleges, and bringing whatever skills I possess to the many committee tasks at hand.

**Metropolitan State College of Denver,
The University of Colorado Denver,
and the Community College of Denver
to Host 2012 Meeting
April 13 -14, 2012**

The 2012 Rocky Mountain Section Meeting will be held on the Auraria campus, near downtown Denver, on Friday and Saturday, April 13-14, 2012.

The meeting will be hosted jointly by Metropolitan State College of Denver, the University of Colorado Denver, and the Community College of Denver.

We invite anyone who is interested in mathematics to attend the meeting. A special invitation is extended to mathematics teachers at all levels, as well as undergraduate students, graduate students, industry and government mathematicians. There will be a variety of invited talks and sessions catering to a multitude of interests.

All participants are encouraged to conveniently register on-line, using our secure website. On-site registration will be available as well.

Information about the conference, including the on-line registration, is available at:

http://mcs.mscd.edu/_u_/maa2012

To register on-line, click on the "Registration" tab.

Invited Addresses and Featured Workshop

The meeting will feature five invited speakers:

- 1) **Mr. Richard Bogdanovich**, Community College of Aurora
The 2011 Burton W. Jones Distinguished Teaching Award Recipient
- 2) **Dr. Robin Wilson**, Oxford University
- 3) **Dr. Douglas Ensley**, Shippensburg University, Second Vice President of MAA
- 4) **Dr. Walter Stromquist**, Editor of *Mathematics Magazine*
- 5) **Dr. Michael Dorff**, Brigham Young University

Featured Workshop: *Using Web Work in Mathematics Courses*

Dr. William Emerson and **Dr. Louis Talman**
Department of Mathematical and Computer Sciences
Metropolitan State College of Denver

The workshop will take place on Friday morning. Talk abstracts and more details are forthcoming, and will be posted on the conference web page.

Call for Papers

Everyone is invited and encouraged to present a talk in the conference. Talks on all mathematical topics are welcome!

The standard length of a contributed talk will be 15-20 minutes. However, we will make an effort to accommodate requests for longer talks and other scheduling preferences (within the constraints of the schedule).

The preferred way to submit the title and abstract of a talk is on-line, through the conference web site:

<http://mcs.mscd.edu/u/maa2012>

Click on the "Submit an Abstract" tab, and fill out the on-line submission form.

Alternatively, submissions can be e-mailed to **Dr. Benjamin Dyhr** (Metropolitan State College of Denver), at bdyhr@mscd.edu.

The **deadline** for submission of abstracts is **Tuesday, March 20, 2012**.

Proposals received after this date will be scheduled on a space-availability basis.

In addition to the general sessions which will encompass all mathematical topics, special sessions are being organized around the following themes.

Combinatorics

History of Mathematics

Mathematics Education

Graduate Student Research

Undergraduate Research

Math Clubs and Student Activities

Probability and its Applications

Participants who submit abstract in any of these topics and would like to be included in any of these special sessions, please indicate it on your submission form.

Friday Evening Banquet

The Friday evening banquet will be at the Curtis Hotel. The hotel is about a 15 minute walk from the Auraria campus. The banquet will feature a cash bar, dinner, prizes and other announcements, and the Banquet Address given by **Douglas Ensley**, 2nd Vice President of the MAA.

Student Activities

Student Talks

There will be sessions at this conference dedicated to both undergraduate and graduate student talks. Plan to give a 15-20 minute talk. Student math clubs are invited to give talks (about research or math club activities) either as a group or as a sequence of talks. Feel free to contact Beth (at beth.schaubroeck@usafa.edu) or Carl (at lienert_c@fortlewis.edu) with any questions about student talks. When you register to speak, please indicate that you want to be in the student session.

Friday, April 13 Student Social Event and Free Lunch

11:00 – 12:45pm

Join us Friday (April 13) for lunch and games. Late arrivals welcomed – join us as your travel plans permit! Bring your favorite math or logic game, or just come to socialize and play games with other students. Free pizza, soda and cookies provided! To help us plan for food, please check the box on the registration form.

Optional Student Activity: Attend a Rockies Baseball game

We have the rare opportunity to combine mathematics with baseball! The Colorado Rockies versus the Arizona Diamondbacks are playing at 6:40pm on Friday April 13. Coors Field is about a 25-minute walk from conference venue.

We'll buy a block of tickets, probably in the Rockpile (outfield bleachers), for \$5 each. Be prepared to dress for any weather! (If the Rockpile is sold out, you will be contacted and asked if you want more expensive tickets.)

If you would like to attend, please email **Beth Schaubroeck** at imaginary@schaubroeck.net by **Wednesday March 21** with your name and number of tickets wanted. Payment will be taken by Beth at the meeting. Please be aware that the game is the same time as the conference banquet. Students are encouraged to attend the banquet, but some choose not to and this provides an opportunity to do something fun and to get to know mathematics majors from other schools.

Additional Meeting Information

Department chairs and **MAA liaisons** are invited to a luncheon and an open discussion on Friday, April 13, at 11:45 - 12:45pm. Please indicate on your registration form if you are interested in attending the luncheon.

All further announcements and updates will be posted on the conference web page at: http://mcs.mscd.edu/_u_/maa2012.

For any questions or requests, please contact any of the Program Co-Chairs:

Shahar Boneh at bonehs@mscd.edu

John Ethier at jethier@mscd.edu

William Cherowitzo at william.Cherowitzo@ucdenver.edu

Jean Hindie at jean.hindie@ccd.edu

Travel and Hotel Information

Travel Information, including maps and directions will be available on the conference webpage:
<http://mcs.mscd.edu/u/maa2012>

The official hotel for the conference is the Curtis Hotel (a Double Tree by Hilton Hotel)

Hotel address: 1405 Curtis St., Denver, CO 80202.

Phone number: 303-571-0300

Web site: <http://www.thecurtis.com/>

The hotel is located about 15 minute walk from the campus. The hotel has a block of rooms reserved for the conference participants, at a special rate of \$109 per night. (There will also be a fee for parking).

The hotel also set up a special reservations web page for the conference. Visit:

http://doubletree.hilton.com/en/dt/groups/personalized/D/DENCHDT-MS-20120412/index.jhtml?WT.mc_id=POG

Group Name: Mathematics Association of America

Group Code: MSC

Participants who are arriving from out of town are encouraged to take advantage of this special offer. Alternatively, there are many other hotels in central Denver. A list of hotels is readily available at web sites such as www.hotels.com.

Preliminary 2012 Meeting Schedule

Friday, April 13

- 10:00 – 12:00 **Workshop:** *Using WebWork in Mathematics Courses*
William Emerson and Lou Talman, Metropolitan State College of Denver
- 10:00 – 4:30 **Registration**
- 11:00 – 12:45 **Student Social Event: Free Lunch for Students and “Mathematical” Games**
- 11:45 – 12:45 **Luncheon for Department Chairs and MAA Liaisons**
- 11:00 – 5:30 **Publisher Exhibits, and MAA Book Sales**
- 1:00 – 1:10 **Opening Remarks and Welcome**
- 1:10 – 1:55 **Burton W. Jones Distinguished Teaching Award Invited Lecture**
Richard Bogdanovich, Community College of Aurora
- 2:00 – 4:55 **Parallel Sessions – Contributed Papers & Special Sessions**
- 5:00 – 5:50 **Friday Keynote Address**
Robin Williams, Oxford University
- 6:15 – 7:15 **Cash Bar** (Curtis Hotel, 1405 Curtis St.)
- 7:15 – 9:40 **Banquet and Awards Ceremony** (Curtis Hotel)
Banquet Address
Douglas Ensley, 2nd Vice President of the MAA

Saturday, April 14

- 8:00 – 11:00 **Registration**
- 8:00 – 8:50 **MAA Rocky Mountain Section Business Meeting**
Please forward agenda items to Heidi Keck at hkeck@western.edu by April 1.
- 9:00 – 9:50 **Saturday Keynote Address**
Walter Stromquist, Editor of *Mathematics Magazine*
- 9:00 – 1:00 **Publisher exhibits and MAA Book Sales**
- 10:00 – 11:50 **Parallel Sessions – Contributed Papers, Special Sessions**
- 12:00 – 12:15 **Coffee Break**
- 12:15 – 1:05 **Grand Finale Keynote Address**
Michael Dorff, Brigham Young University

Watch for regular meeting and schedule updates at: http://mcs.mscd.edu/_u_/maa2012

MAA Rocky Mountain Section

Suggestions for Speakers

The Rocky Mountain Section would like to offer the following suggestions, especially to first-time speakers, regarding preparation of a talk at the conference.

1. The standard talk length is 20 minutes, (with longer times available upon request, subject to the limitations of the program). Thus, you should prepare your presentation to fit the time allotted. If possible, plan to leave a few minutes at the end of your presentation for questions.
2. A moderator will be assigned to facilitate each session of presentations. The moderator will introduce the speaker, assist in distribution of any handouts, signal the end of the presentation, and ask for questions from the audience.
3. If handouts are to be provided, give them to the moderator prior to the beginning of the session including your talk. Plan to bring about 35 handouts and be prepared to give attendees your e-mail address in case the supply runs out. It may also be possible to arrange for posting of electronic materials from your talk on the section website. Check with program organizers concerning this possibility.
4. Do not include too much detailed technical material in your presentation. Focus on providing the audience with insight into your topic and its key notions. Remember that most members of the audience will not be experts in the field you are discussing, and that the audience is likely to include students.
5. All session rooms will be equipped with a projector and a laptop hook up. Accordingly, you can present your talk using Power Point slides, PDF, or similar, which will greatly enhance the pace of a presentation. However, make sure that notes on the slides or transparencies are typed in a font big enough and with spacing adequate to be seen clearly 50 to 100 feet away.

Denver Teaching Fellows Program



Last year in Denver:

- Only 52% of students graduated from high school

**Your skills can change this number.
Become a Denver Teaching Fellow.**

The **Denver Teaching Fellows** program is an innovative teacher recruitment and training program of Denver Public Schools. Our goal is to increase the effectiveness of the district's teaching force through the recruitment and training of outstanding individuals dedicated to closing the achievement gap and to making at least a 3 year commitment to teaching in Denver Public Schools.

We seek outstanding professionals and recent graduates to make a difference in the lives of Denver students by becoming *math*, *special education*, or *bilingual Spanish* teachers in our highest need public schools. After completion of summer training, Fellows are eligible to teach in August 2012, earning a full-time teacher salary and benefits.

Interested candidates may visit www.DenverTeachingFellows.org to learn more and to apply online to join this highly-selective network of new teachers. **Our final application deadline is February 27th, however it is to your advantage to apply as soon as possible as our admissions are rolling and interview slots, which are limited, are filling up quickly.**

Candidates must have a bachelor's degree. Spanish proficiency is highly desired, but only required for bilingual Spanish positions. **Candidates do not need education coursework or teaching experience to apply.**

Want to learn more and hear first-hand about our Fellows' experiences in the classroom?

Visit www.DenverTeachingFellows.org and view videos of current Fellows in action in the classroom.

Denver Teaching Fellows

Their potential is mile high. Help them reach it. *Teach.*

www.denverteachingfellows.org

(720) 423-3248 | info@denverteachingfellows.org

Grants Available

Section Activity Grants Available

The purpose of the Section Activity Grants program is to assist Section members in funding projects in support of Section Mission. These projects must be clearly tied to one or more of the Rocky Mountain Section Mission Goals and the project director must be a member of MAA. Grants will not exceed \$750 per project. Matching funds from host institution are preferred, but not required. To apply for a Section Activity Grant, submit the following to the Section Secretary/Treasurer:

- (a) Description of project (no more than one page);
- (b) Statement of how project supports Mission Goals (no more than one page);
- (c) Estimated budget;
- (d) Description of matching funds available, if any;
- (e) Vitae of project director(s).

If funded, a report on the project will be filed by the Project Director upon completion (no more than one page) and a report will be made at the next meeting of the Section. Complete details on the selection process and application guidelines are posted on the section website. Grants will be reviewed once a year. All application materials are due November 1st of each year.

Student Recognition Grants Available

The establishment of a Student Recognition Grant Program was approved by the section membership at the 2003 Annual Business Meeting. In support of this program, the Section will set aside \$500 every calendar year. From these monies, the Section will make grants for the purpose of recognizing superior achievement in mathematics on the part of (1) students enrolled in post-secondary institutions within the geographic region served by the Section and (2) high school students whose school districts, or other appropriate political subdivisions, substantially intersect the geographic region served by the Section.

Proposals for such grants must

1. Originate from a member of the Rocky Mountain Section of the Mathematical Association of America on behalf of an agency, institution, or organization whose

stated purposes are consistent with recognizing or encouraging superior academic achievement at the high school level;

2. Be in the hands of the Chair of the Rocky Mountain Section no later than March 15 of the year in which the proposed recognition is to be made;
3. Include the criteria under which superior achievement in mathematics is to be recognized, together with the time and the manner of such recognition;
4. Report, insofar as possible at the time of the proposal, other potential sources of support together with proposals or requests made or intended; and
5. Be limited to a maximum amount of \$250.

The Executive Committee will review all proposals for grants under this policy and will make such grants as, in its sole judgment, it deems proper. In keeping with the section mission, funding priority will be given to grants that include recognition of undergraduate students. Funding decisions will be announced no later than the Annual Business Meeting of the Section. Monies not expended during any particular year shall revert to the Section's general fund.

About Our Logo

The logo for the Rocky Mountain Section of the Mathematical Association of America was created in by Mark Petersen in 2001. A graduate student in the Applied Mathematics Department at the University of Colorado at Boulder at that time, Mark says of his design:

“The mountain symbols were chosen because analysis is the foundation for all of mathematics. The equation $e^{i\pi} + 1 = 0$ must rank among the most beautiful formulas in mathematics. It connects the five most important constants of mathematics with the three most important operations - addition, multiplication, and exponentiation. These five constants symbolize the four major branches of classical mathematics: arithmetic, represented by 0 and 1; algebra, by i ; geometry, by π ; and analysis, by e . (Quoted from Eli Maor’s *e, The Story of a Number*). I chose to portray this equation as a train because rail has historically been the life blood of the American West, and trains are complementary to any mountain scene.”

Meetings Calendar

MAA Rocky Mountain Section Meeting Metropolitan State College of Denver April 13-14, 2012

NCTM annual meeting; Philadelphia, PA
April 25-28, 2012

MAA MathFest; Madison, WI; August 2-4, 2012

Joint Mathematics Meetings; San Diego, CA
January 9-12, 2013

MAA Rocky Mountain Section Meeting
Adams State College
April 2013

NCTM annual meeting; Denver, CO
April 17-20, 2013

MAA MathFest; Hartford, CT; August 1-3, 2013

Joint Mathematics Meetings; Baltimore, MD
January 15-18, 2014

MAA Rocky Mountain Section Meeting
University of Wyoming
April 2014

NCTM annual meeting; New Orleans, LA
April 9-12, 2014

MAA MathFest; Portland, OR; August 7-9, 2014

Joint Mathematics Meetings; San Antonio, TX
January 10-13, 2015

NCTM annual meeting; Boston, MA
April 15-18, 2015

MAA 100th Anniversary MathFest
Washington, DC; August 5-8, 2015

Joint Mathematics Meetings; Seattle, WA
January 6-9, 2016

NCTM annual meeting; San Francisco, CA
April 13-16, 2016

Joint Mathematics Meetings; Atlanta, GA
January 4-7, 2017

Joint Mathematics Meetings; San Diego, CA
January 10-13, 2018

**The Rocky Mountain Section of
The Mathematical Association of America**

**Burton W. Jones Award
for Distinguished College or University Teaching of Mathematics**

Burton W. Jones Award Nomination Form

Name of Nominee _____
(First name first)

College or University Affiliation _____

College or University Address _____

City _____ State _____ Zip _____

Is the nominee a member of the MAA? _____

Number of years of teaching experience in a mathematical science _____

Has the nominee taught at least half time in a mathematical science
for the past three years (not counting a sabbatical period)? _____

On a separate page, briefly describe the unusual or extraordinary personal and professional qualities of the nominee that contribute to her or his extraordinary teaching success.

Name of Nominator) _____
(First name first)

Address of Nominator _____

Email Address _____

Telephone: Work _____ Home _____ Fax _____

Nominator's Signature _____

Nomination forms should reach Section Secretary by December 1 of each year.
Complete nomination materials should reach Section Secretary by January 15 of each year.

Section Secretary: Heidi Keck, hkeck@western.edu
Western State College; Hurst Hall; Gunnison, CO 81231.

Please consult the Section webpage (<http://sections.maa.org/rockymt>) for complete guidelines.

Voluntary Section Dues

Many thanks to those members who have made a voluntary dues contribution to the section along with their Spring Meeting Registration!

Although the section has found itself in good financial health in recent years, additional funds are always needed in order to pursue special initiatives suggested by the membership. The successful John Fauvel Memorial Conference and William Dunham Special Lecture, both supported in part by the Section Activity Grant program, provide excellent examples of what can be done with even a small amount of funding to support our section mission and goals.

A voluntary section dues contribution from you now can help build up funds in support of similar initiatives!

To submit your dues, simply return the coupon below with a check for any amount you wish - every little bit will help, and all contributors will receive a letter acknowledging the contribution for their financial records.

MAA Rocky Mountain Section Voluntary Dues Contribution Form

Name _____

Address _____

_____ ZIP _____

Please indicate in the space provided how you would like your dues to be used:

- _____ Undergraduate Student Initiatives
- _____ Graduate Student Initiatives
- _____ Burton W. Jones DTA Fund
- _____ Section Activity Grant Program
- _____ Wherever needed most
- _____ Other: _____
- _____ **TOTAL DUES PAID (\$10 recommended)**

Please make check payable to: **MAA Rocky Mountain Section** and return to: Heidi Keck, MAA Rocky Mountain Section Treasurer/Secretary: Western State College, Hurst Hall; Gunnison, CO 81231

MAA Rocky Mountain Section Mission Statement

**To promote excellence in mathematics education,
especially at the collegiate level.**

Mission Related Goals

1. To foster scholarship, professional development, and professional cooperation among the various constituencies of the mathematical community within the region.
2. To foster the implementation and study of recent research recommendations for the teaching, learning and assessment of collegiate mathematics.
3. To support the implementation of effective mathematics preparation programs of prospective teachers at all levels.
4. To enhance the interests, talents and achievements of all individuals in mathematics, especially of members of underrepresented groups.
5. To provide recognition of the importance of mathematics, mathematical research and quality mathematics teaching, and promote public understanding of the same.
6. To provide regional leadership in the promotion of systemic change in mathematics education, and in the enhancement of public understanding about the needs and importance of mathematical research and education.