



SPRING 2015 NEWSLETTER

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

Spring 2015 Newsletter in PDF Format for Printing

Click on the following link for PDF document that is formatted for printing.

<http://rowdy.msudenver.edu/~sundbyel/maanews/spring2015news.pdf>

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2014 - 2015 Section Officers and Committee Members

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

Section Executive Committee Officers for 2014 – 2015

Chair	Kyle Riley South Dakota School of Mines and Technology Rapid City, SD 57701	kyle.riley@sdsmt.edu 605-394-2471
Past Chair	William Cherowitzo University of Colorado Denver Denver, CO 80217	william.cherowitzo@ucdenver.edu 303-556-8381
Vice-Chair	Erica Marlys Hastert CCCOOnline	erica.hastert@cccs.edu 720-858-2334
Secretary/ Treasurer	Heidi Keck Western State Colorado University Gunnison, CO 81231	hkeck@western.edu 970-943-3167
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Program	Marlow Anderson Andrea Bruder Colorado College Colorado Springs, CO	manderson@coloradocollege.edu andrea.bruder@coloradocollege.edu

Other Committee Members and Representatives

Section Nominating Committee

Mike Brilleslyper (Chair), USAFA	mike.brilleslyper@usafa.edu
Jeff Berg, ACC	jeff.berg@arapahoe.edu
Gus Greivel, Colorado School of Mines	ggreivel@mines.edu

Awards Selection Committee

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Erica Marlys Hastert, CCCOnline	erica.hastert@cccs.edu
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2016 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://sections.maa.org/rockymt> and in this newsletter) by **15 December 2015**. **Complete nomination materials** (described on the website) are due **15 January 2016**.

Chair's Report

Greetings Section Members!

I hope the New Year will be a good one for you. I was fortunate enough to attend the Joint Mathematics Meeting this year and I highly encourage any section member to attend one of the national meetings. It is really a great place to meet colleagues and get ideas that may help with the challenges in the profession. Of course, these benefits also exist in our section's showcase event: the spring meeting. Colorado College is planning a terrific meeting, which will be held April 17-18, 2015. Special thanks and recognition goes to **Marlow Anderson** and **Andrea Bruder** for their hard work on planning this meeting. I hope you consider attending our next spring meeting and please encourage your students and colleagues to attend. The section

meeting welcomes a wide variety of talks and provides a supportive environment for student talks. Please remember that 2015 is the centennial of the MAA and we plan to have special features of our spring meeting to help celebrate this anniversary.

There are a couple of other section activities to mention. The section has a taskforce reviewing the section bylaws, which is a regular review mandated by the central MAA organization. Special thanks to **Bill Cherowitzo**, **Erica Hastert**, and **Mike Brilleslyper** for their hard work on getting our bylaws reviewed and the draft proposal that is included in this newsletter.

Our section is already planning future section meetings at:

April 8-9, 2016 – Colorado Mesa University, Joint section meeting with the Intermountain Section

2017 – Colorado State University– Pueblo, 100th anniversary of the Rocky Mountain Section

To learn more about what is going on please check out our new section website at <http://sections.maa.org/rockymt/> and of course the national website <http://www.maa.org/>.

Special thanks to **George Heine** and **Janet Barnett** for their work on the new website. I would also like to thank **Linda Sundbye** for her terrific work on maintaining this newsletter and the hardest job among the section officers is secretary/treasurer, which means we need to give a very special thanks to **Heidi Keck** for being our rock. I hope to see you this April in Colorado Springs at our section meeting. Have a great spring!

Respectfully Submitted,

Kyle Riley, SDSMT

Chair, Rocky Mountain Section

Governor's Report

Member's dues have been raised \$6 per year from \$169 to \$175. Dues represent only 15% of the MAA revenue stream. Recent restructuring of the dues is producing additional revenue because there are no longer perpetual \$45 introductory memberships. A new option for monthly payment has just been introduced and is being watched to see membership reaction. The MAA has run deficits for each of the last ten

years but MAA leadership seems to feel the deficit can be closed in a couple of years.

The American Math Competition has been moved from Lincoln, Nebraska to Washington, D.C. in order to create efficiencies and better communication.

The structure of Departmental Memberships has been overhauled. Features include:

(a) Departmental Membership includes an unlimited number of Student Memberships.

(b) The Departmental Membership includes one full MAA Membership

(c) Instructors in the Department receive discounted W3BWork hosting (initially \$200/year rather than \$300/year.)

Total student enrollment and PhD-granting status determines the institutions dues category (member will self-select category).

Enrollment	Non-PhD	PhD
<7000	\$500	\$750
7000-19,999	\$700	\$1000
20,000+	\$900	\$1500

Discussions are continuing at JMM and MathFest meetings about the role of governors and how to streamline some of what they do. We are expecting an initial proposal at MathFest in Washington in 2015.

Special plans are being made for the 100th Anniversary of the MAA to be celebrated at MathFest this summer. Registration will be open as early as March for this meeting.

Respectfully submitted,

Bill Emerson, MSU Denver

Governor, Rocky Mountain Section

20th Annual Colorado Mathematics Awards Ceremony/Reception

Plans are in the works for CMA XX -- the 20th Colorado Mathematics Awards Ceremony and Reception to be held on Tuesday, May 12 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 the outstanding members of the Colorado American Regions Mathematics League team. At the collegiate level we'll be recognizing all CO Putnam scorers in the top 500 and the top team(s) on the Mathematical Contest in Modeling. We expect to recognize between 50 and 60 winners. With the winners,

parents, and teachers, we expect between 120 and 130 to attend the event.

We appreciate the support that the Rocky Mountain Section has provided for this event over the years.

Other sponsors of the Colorado Mathematics Awards are the American Mathematics Competitions, CH2MHill, the Professional Engineers of Colorado, and individual members of the Colorado Mathematics Awards Steering Committee.

Suggestions for additional sources of funding are always welcomed. Please contact me at gibbs_d@fortlewis.edu

Dick Gibbs

Emeritus Professor of Mathematics

Fort Lewis College

12th Annual PPRUMC United States Air Force Academy Saturday, March 7, 2015

Please note that due to inclement weather, the PPRUMC has been rescheduled for Saturday, March 7, 2015.

Please mark your calendars for the next Pikes Peak Regional Undergraduate Mathematics Conference! This year's conference is on **Saturday, March 7, 2015 at the United States Air Force Academy**. (To comply with security requirements at the Air Force Academy, *pre-registration will be required* for all who attend the conference, both students and faculty.)

The focus of this one-day conference is to give undergraduate mathematics students an opportunity to present their work in a professional, supportive setting. It is also an occasion for students to become acquainted with other students from the region, and to learn more about the mathematics profession. There are no registration fees, lunch will be provided, and some financial reimbursement for student travel expenses will be available. A free pre-conference social event is planned for Friday evening prior to Saturday's full-day conference.

Please begin now to encourage your students both to attend and to make a presentation. Presentation topics could include the results of classroom or independent study, as well as REU or other research projects. Both

research and expository topics are welcome. The deadline for submitting an abstract will be in early February.

Further details and registration information will be available later this fall through a conference website. If you would like to be on the email distribution list for this conference, please email **Beth Schaubroeck** at beth.schaubroeck@usafa.edu or **Ian Pierce** at ian.pierce@usafa.edu.

Funding for the PPRUMC is provided by NSF grant DMS-0846477 through the MAA Regional Undergraduate Mathematics Conference Program, www.maa.org/RUMC

Attention Putnam Coordinators

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

11th Annual FRAMSC University of Colorado Denver Saturday, February 28, 2015

Please inform students and faculty that the 11th Annual Front Range Applied Mathematics Student Conference (FRAMSC) will be held at the University of Colorado Denver on Saturday February 28, 2015. This conference is student organized all but plenary student presentations, and student run. Undergraduate and graduate students are encouraged to present their research or Math Modeling competition result.

Plenary Speaker: Professor **Harvey Segur**, Department of Applied Mathematics, CU Boulder

Title: *Tsunami*

Abstract: Tsunami have gained worldwide attention over the past decade, primarily because of the destruction caused by two tsunamis: one that killed more than 200,000 people in coastal regions surrounding the Indian Ocean in December 2004; and another that killed 15,000 more and triggered a severe nuclear accident in Japan in March 2011. This talk has three parts. It begins with a description

of how tsunamis work: how they are created, how they propagate and why they are dangerous. This part involves almost no mathematics, and should be understandable by everyone. The second part of the talk is about the operational models now being used to provide tsunami warnings and forecasts. These models predict some features of tsunami accurately, and other features less accurately, as will be discussed. The last part of the talk is more subjective: what public policies could be enacted to mitigate some of the dangers of tsunami? Much of the material in this talk appeared in a paper by Arcas & Segur, Phil. Trans. Royal Soc. London, **370**, 2012.

Abstract deadline: Friday Feb. 20, 2015.

For more information please see: <http://amath.colorado.edu/content/2015-siam-front-range-student-conference>

Sponsored by the University of Colorado at Boulder, the University of Colorado at Colorado Springs, the University of Colorado Denver, Colorado School of Mines, Colorado State University, and the University of Wyoming SIAM student chapters.

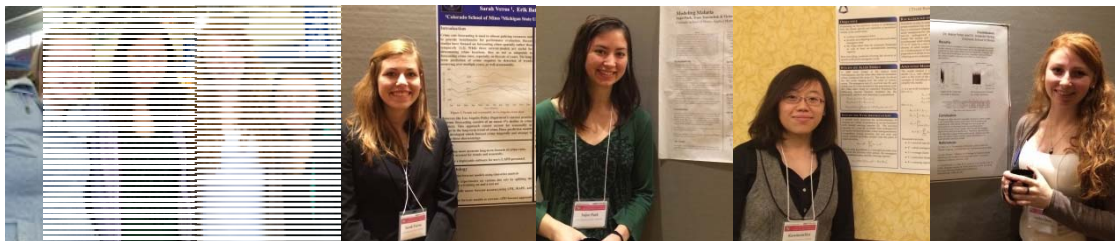
Section News

Colorado School of Mines

This year, five Colorado School of Mines (CSM) students attended the Nebraska Conference for Undergraduate Women in Mathematics accompanied by faculty member, **Rebecca Swanson**. **Taylor Chott**, **Kownoon Her**, **Sujee Park**, and **Sarah Verros** all presented posters. **Kelsey Kalmbach** also attended the conference. The highlights of the conference included a talk by Harvey Mudd president, Maria Klawe, a mathematics jobs panel that included both academics and employees of Nike and Xbox Live, undergraduate research presentations, and breakout sessions on a wide range of topics.

The CSM Putnam team had about 15 students participate in this year's exam. In preparation, they met biweekly throughout both the spring and fall semesters. Additionally, they had their first ever CSM Mathematics Challenge with approximately 20 participants. The CSM Math Challenge was an event organized to provide students with practice completing Putnam-like problems in an exam setting.

Students with the top scorers received prizes. **Dr. Rebecca Swanson** and **Dr. Stephen Pankavich** are the faculty advisors for the CSM Putnam team.



Left to right in the first two pictures: Kelsey Kalmbach, Sujee Park, Taylor Chott, Kownoon Her, Sarah Verros



Mines President Dr. M.W. Scoggins presented the award to Dr. Swanson



Society for Women in Mathematics Meeting

Dr. Rebecca Swanson, Teaching Associate Professor in the Applied Mathematics and Statistics Department, received **The Mines Martin Luther King Jr. Recognition Award**.

Dr. Swanson co-developed the Society for Women in Mathematics, a chapter of the AWM, creating a community of support for female faculty and students and enhancing the diversity with the department. She actively encourages the participation of students and currently holds leadership positions in the Putnam Exam Seminar, Math Club, and the AMS Outreach Committee. Nationally, Dr. Swanson was an invited member of the MAA Council on Outreach and was a mathematician in residence for three summers at the Summer Mathematics Program for Women at Carleton College. Her unwavering commitment to mentoring students and enhancing their experience make Dr. Swanson an appropriate recipient of this award.

The **Society for Women in Mathematics (SWiM)** is a student organization at the Colorado School of Mines and an AWM chapter. Over the past year SWiM hosted monthly speakers who shared their mathematical stories, how they use mathematics in their jobs, and any advice they had for our members. Additionally, the group began other types of programming this past semester. In the fall, SWiM held a panel on graduate school and a workshop on the Impostor Syndrome.

At the December 2014 graduation the **Outstanding Graduating Senior Award** was awarded to **Abigail Branch**.

Last but not least, as part of a College Factual Survey of USA Today, the Department of Applied Mathematics and Statistics at Mines was **ranked number 2** in the top 10 universities **in the nation** for a major in mathematics. The full article is available at

<http://college.usatoday.com/2014/10/08/top-10-colleges-for-a-major-in-math/>

Metropolitan State University of Denver

Our colleagues **Jim Loats** and **Lou Talman** who both joined the department in 1983 will be retiring this spring. Jim will be on transitional retirement for next year.

University of Colorado at Boulder

In 2014-2015 we hired assistant professor **Sean O'Rourke**, whose research interests include probability and random matrix theory. He received his Ph.D. at the University of California, Davis, under the direction of Alexander Soshnikov in 2011. He comes to Boulder after spending a year at a postdoc at Rutgers and two years at a postdoc at Yale.

We also hired three two-years Burnett Meyer postdocs: **Elizabeth Gillaspy**, who received her PhD at Dartmouth and studies C*-algebras, **Alden Gassert** who received his PhD at UMass and works in algebraic number theory, and **Sam Molcho**, who received his PhD at Brown and studies algebraic geometry.

The family and friends of our beloved former colleague **Rich Laver** endowed an annual summer graduate fellowship in his honor. Rich was an outstanding set theorist and a wonderful man, who succumbed to Parkinson's disease in 2012. We have raised more than 60% of the total we need for this permanent remembrance for Rich. If you would like to contribute to this living tribute, you can go online at <http://www.cufund.org/give-now/> and enter "Richard Laver Graduate Fellowship" in the FUND box

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@msudenver.edu

Rocky Mountain Section History

Section History information is now on the website!

Go to:

<http://sections.maa.org/rockymt/history.html>

and just click on one of the "HISTORY" links. This is still a work in progress! Anyone with historical documents, photos, or time and interest to work on section history is welcome to contact us at:

George Heine, gheine@mathnmaps.com

Janet Barnett, janet.barnett@csupueblo.edu

Section Nominating Committee Report

The nominating committee is seeking strong leaders with a desire to serve the MAA to run for chair-elect of the Rocky Mountain Section. The position of section chair is vital to the organization and operation of the Rocky Mountain Section. The chair-elect serves in that capacity for one year before assuming a two-year role as chair, followed by a one-year term as past-chair. The section chair serves on the Executive Committee of the section and is an ex-officio member of all section committees. Most importantly, the chair provides leadership for the section and consistently seeks ways to enhance the mission of the MAA within the region.

If you are interested in running for chair-elect or if you know someone that would be an outstanding candidate, please contact any member of the nominating committee:

- Mike Brilleslyper (USAFA)
mike.brilleslyper@usafa.edu
- Jeff Berg (Arapahoe CC)
jeff.berg@arapahoe.edu
- Gerrald Greivel (Colorado School of Mines)
ggreivel@mines.edu

Elections will be held during the business meeting at the MAA Rocky Mountain Section annual meeting to be held at Colorado College, April 17-18, 2015. Note: Elected officers of the section must be members of the MAA.

**Mathematics Awareness Month:
Math Drives Careers
April 2015**

Innovation is an increasingly important factor in the growth of world economies. It is especially important in key economic sectors like manufacturing, materials, energy, biotechnology, healthcare, networks, and professional and business services. The advances in and applications of the mathematical sciences have become drivers of innovation as new systems and methodologies have become more complex. As mathematics drives innovation, it also drives careers.

Students are an obvious group that is interested in opportunities for meaningful and challenging careers. To increase awareness of the opportunities for careers using mathematics, we sent two copies of this year's Mathematics Awareness Month poster to nearly 4,000 individuals who are in daily contact with college students in STEM majors.

See more at:

<http://www.mathaware.org/index.html#sthash.NPW6Qa.dpuf>

**Colorado Council of Teachers of
Mathematics (CCTM) News**

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

(1) Nominate teachers: The CCTM would like to recognize teachers who display excellence in teaching mathematics. CCTM will choose up to one elementary (K-6) and up to one secondary (6-12) teacher from each CCTM region in Colorado to honor at their annual conference held each Fall. Nominations are due by March 15, 2015.

(2) Regional Workshop: The CCTM in cooperation with Colorado Department of Education continues to present regional workshops to support teachers adapting the new Colorado Academic Standards (CAS). These workshops are usually held early November and February. Both pre-service and in-service

teachers would benefit from these workshops. More information about upcoming workshops and nominations could be found at CCTM website: www.cctmath.org.

(3) The CCTM 2015 Conference is scheduled for September 24-25, 2015 at the Denver Merchandise Mart. The deadline to submit a proposal and the conference details will be available on the website in **early spring**. Please consider submitting a proposal to be a speaker and encourage your colleagues to attend the conference.

(4) The Winter issue of CMT Journal is available to the non-members. If you are interested in submitting a paper, please see the articles published in this issue and feel free to contact the editor, Sandie Gilliam.

Gulden Karakok, UNC
CCTM Representative

**MAA Centennial Celebration
at MathFest
Washington DC; August 5-8, 2015**

The MAA turns 100 years old in 2015! A number of special events are planned for MathFest in Washington DC in August. More information is available at:

<http://www.maa.org/about-maa/maa-history/celebrating-the-centennial>

**Colorado College
to Host the
100th Anniversary
Rocky Mountain Section Meeting
April 17 - 18, 2015**

Colorado College is pleased to host the 2015 Rocky Mountain Section Meeting of the Mathematical Association of America. The meeting will take place April 17 and 18 on the campus of Colorado College in Colorado Springs. The conference marks the hundredth anniversary of our section and our organization.

Please see the conference website <https://www.coloradocollege.edu/other/maa/> for further details about the program, registration, and abstract submission. Registrations received by March 31st are at a reduced rate.

The meeting features three plenary speakers: **William Dunham** (George Polya Lecture), **Karen Saxe** (our Section Visitor from the national leadership, who will give the banquet talk), and **Anne Dougherty** (the 2014-15 Burton W. Jones Award winner). In addition, the conference will include contributed paper sessions on both Friday afternoon and Saturday morning. We encourage expository and research talks about mathematics, talks about mathematical history, and talks about curriculum and pedagogy. We especially welcome talks by students, both undergraduate and graduate.

We have already organized special sessions on the following topics:

- The History of Mathematics
- Numerical Algebraic Geometry
- Research in Mathematics Education
- Innovations in the Classroom
- Graduate Student paper session
- Undergraduate Student paper session

The deadline for abstract submissions is March 31. We would welcome further suggestions for special sessions.

In addition, there will be a pre-meeting workshop on Friday morning, led by Dr. **David Brown** of Colorado College. The workshop will demonstrate ways to incorporate the fitting of models to data in courses across the undergraduate mathematics curriculum.

Friday will feature a luncheon for chairs and departmental liaisons, hosted by Dr. **Kyle Riley**, the current Chair of the section. We encourage as many institutions as possible to send a representative to this lunch.

If you have any questions, please contact **Marlow Anderson**, MAnderson@coloradocollege.edu or **Andrea Bruder** at Andrea.Bruder@coloradocollege.edu.

Please check the conference website <http://www.coloradocollege.edu/other/maa/> regularly for upcoming details. You may register and submit abstracts for talks there.

Student Activities

Please come and join us for the section meeting in April at Colorado College! We will have pizza and games to kick off the meeting on Friday at lunchtime. While you're there, please consider giving a student talk. Both graduate and undergraduate talks are encouraged.

Feel free to contact Beth (beth.schaubroeck@usafa.edu) or Carl (lienert_c@fortlewis.edu) with any questions.

Proposed By-Laws Revisions

The Section By-Laws have been updated and revised. The new proposed Section By-Laws are on page 19 of this newsletter. These will be discussed and voted on at the Business Meeting on April 18.

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.

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

PPRUMC; USAFA; March 7, 2015

ICTCM; Las Vegas, NV

March 12-15, 2015

NCTM annual meeting; Boston, MA

April 15-18, 2015

MAA Rocky Mountain Section Meeting; Colorado College

Colorado Springs, CO, April 17-18, 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

MAA Rocky Mountain Section Meeting; Colorado Mesa University

Grand Junction, April 8-9, 2016

Joint meeting with the Intermountain Section

MAA MathFest; Columbus, OH;

August 3-6, 2016

Joint Mathematics Meetings; Atlanta, GA

January 4-7, 2017

NCTM annual meeting; San Antonio, TX

April 5-8, 2017

100th Anniversary

MAA Rocky Mountain Section Meeting; Colorado State University - Pueblo

April, 2017

MAA MathFest; Chicago, IL; July 26-29, 2017

Joint Mathematics Meetings; San Diego, CA

January 10-13, 2018

NCTM annual meeting; Washington DC

April 25-28, 2018

MAA MathFest; Denver, CO; August 1-4, 2018

Joint Mathematics Meetings; Baltimore, MD

January 16-19, 2019

MAA MathFest; Cincinnati, OH;

July 31-August 3, 2019

Joint Mathematics Meetings; TBD

January 2020

Joint Mathematics Meetings; Washington DC

January 6-9, 2021

**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 15 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 Colorado University; 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 Colorado University, 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.

By-Laws¹ of the Rocky Mountain Section Mathematical Association of America

ARTICLE I Name and Purpose

1. The name of this Section shall be the Rocky Mountain Section of the Mathematical Association of America.
2. The purposes of the Rocky Mountain Section shall be to advance the mission of the MAA on a regional level (namely within the territory defined in Article II, section 1) ; to offer guidance to the MAA as it forms and fulfills its mission; to provide professional development and networking activities for section members and mathematics students in geographically accessible locations; and to promote discussion and action on issues affecting mathematics teaching, learning, and research in the region. The Section shall give special attention to improving education in the mathematical sciences at the collegiate level.

ARTICLE II Membership

1. The membership of the Rocky Mountain Section shall be members of the Mathematical Association of America whose MAA mailing addresses are in the states of Colorado, South Dakota west of the Missouri River, Wyoming and part of Montana, postal codes 80000 – 81699, 57700 – 57799, 82000 – 83199, 59715 – 59717. Exceptions may be made by the MAA membership department upon request of the affected member.

ARTICLE III Officers

1. The officers of this Section shall be a Chairperson, Vice-Chairperson, Past Chairperson, Chairperson-Elect and Secretary-Treasurer.
2. The Executive Committee of the Section shall consist of the Officers of the Section, the Section Governor, and the Program Chairperson(s) of the next annual meeting.
3. Each Section Officer must be a member of the Mathematical Association of America, and of this Section. The Vice-Chairperson shall be associated with a two-year school.
4. The Officers shall be elected during the business meeting at the Annual Meeting of the Section according to the schedule below, and shall take office upon the adjournment of the meeting.

Chairperson-Elect: Every two years, beginning in 2015, a Chairperson-Elect is elected at the Annual Meeting. This person holds that position for one year, followed automatically by a two-year term as Chairperson, then a one-year term as Past Chairperson.

Vice-Chairperson: Every two years, beginning in 2016, at the Annual Meeting for a two-year term. The Vice-Chairperson may be re-elected to not more than two consecutive terms in office.

¹ Approved in 1979; modified in 1998; current revision 2015

Secretary-Treasurer: Elected every third Annual Meeting, beginning in 2017, for a three-year term. The Secretary-Treasurer may be re-elected to not more than two consecutive terms in office.

5. The duties of the Section officers shall be:
 - a. The Chairperson shall preside at each meeting of the Section and of the Executive Committee of the Section. The Chairperson shall appoint every committee of the Section and be an ex-officio member of each committee, unless directed otherwise by the membership of the Section at an official Section meeting.
 - b. The Vice-Chairperson shall assume the responsibilities of the Chairperson if the Chairperson is absent or incapacitated. The Vice Chairperson should represent the interests of the two-year colleges and encourage two-year college faculty members to participate in MAA activities and programs.
 - c. The Chairperson-Elect will assume the duties of the Vice-Chairperson if the Vice-Chairperson is absent or incapacitated. The Chairperson-elect should assist the Chairperson in leading the section and learn the duties of the position. The Chairperson-elect will serve on various section committees as appointed by the section Chairperson.
 - d. The Secretary-Treasurer shall be responsible for the records of the Section, the filing of reports to the MAA office, and for mailings to the Section (call for papers, program announcements, etc.) In addition, the Secretary-Treasurer shall see the recommendations of the MAA and/or the Section's Executive Committee be carried out effectively. The Secretary-Treasurer will keep all books and accounts, receive and be responsible for all Section funds, and pay all bills of the Section from its funds. The Secretary-Treasurer shall be an ex-officio member of all committees.
6. The Executive Committee shall conduct the affairs of the Section between meetings of the Section membership. It is empowered to fill any vacancy among the officers of the Section or the Executive Committee until the next Annual meeting. A quorum for the Executive Committee to conduct section business or fill section officer vacancies shall be four members and must include at least one of the Chairperson or the Secretary-Treasurer. The Executive Committee is empowered to conduct and vote on time-sensitive section business electronically, when meeting in person is not practical.

ARTICLE IV Meetings

1. The Section shall hold one regular meeting each year, to be referred to hereafter as the Annual Meeting. There shall be a Business Meeting typically held in conjunction with the Annual Meeting.
2. The Annual Meeting shall be planned by the Program Committee. The Business Meeting shall be planned by the Executive Committee.
3. The quorum for a business meeting shall consist of not fewer than 12 members of the section and no business may be validly transacted at a business meeting where less than a quorum is present. The only exception to this is a call to have the Executive Committee poll the membership electronically and act accordingly.
4. Total Funds available to the Program Committee for the Annual Meeting consist of the registration fees plus \$100 provided by the Section from funds received from the Association. The Section contribution may be changed by unanimous consent of the Executive Committee.

5. At least 3 months prior to the Annual Meeting, the Program Committee shall draft a budget of anticipated costs for the meeting. These costs will include any fees for presentation facilities, the banquet facility, supplies, printing, refreshments, and any other known costs associated with running the meeting. The Program Committee will suggest participant fees for the banquet, the chairs' luncheon, and registration. The budget and all fees are subject to approval by the Executive Committee.
6. Additional program meetings may be organized by the Section after approval at a business meeting. The Executive Committee may initiate or be petitioned to initiate a request for such additional program meetings to be presented at the next business meeting. Such a request must be accompanied by a statement of possible funding sources and an estimate of the number of participants.
7. A member or group of members of the Section may request that the Executive Committee call a special business meeting by submitting a petition stating the nature and reason(s) for such a special meeting and bearing the signatures of twenty-five (25) members of the Section. A decision by the Executive Committee not to honor such a request will be reversed by the submission of a petition requesting the special meeting and signed by twenty percent (20%) of the Section's membership as determined by the previous year's roll. The Executive Committee shall determine the time and place of special meetings.
8. Each member of the Section shall be notified at least twenty days in advance of the Annual Meeting or Special Meeting of the Section.

ARTICLE V Dues and Use of Assets

1. Every person attending the Annual Meeting shall pay a registration fee determined by the Executive Committee. The Executive Committee may choose to set different fees for distinct categories of attendees or to waive the fee for a limited number of honorees. In some cases, the Executive Committee may elect to use section funds to pay the registration fee for a limited number of honorees.
2. The assets of the Rocky Mountain Section shall be used exclusively to further the purposes of the Section and in the event of the dissolution of the Section, the remaining assets will be returned to the MAA.
3. The Section Secretary-Treasurer is authorized to solicit voluntary dues from members of the Section in an amount recommended by the Executive Committee and approved by the membership at a regular meeting of the Section. Through coordination with the MAA and with the authorization of the Section Executive Committee, the section may periodically solicit contributions from other sources.

ARTICLE VI Committees

There shall be four standing committees of the section: the Program Committee, the Nominating Committee, the Teaching Award Committee, and the Section Activity Grant Award Committee. In the appointment of members to committees, the section will strive for broad representation and diversity of members in an effort to be as inclusive as possible and to avoid implicit bias.

1. The Program Committee will consist of the Past Chairperson or Chairperson-Elect, the Program Chairperson and the other officer's ex-officio.

- a. Program Chairperson: The Program Chairperson is appointed by the host institution for the Annual Meeting. This shall be determined as far in advance as possible to allow for planning of the Annual Meeting and coordination between the Program Chairperson and the other members of the Executive Committee. It is allowable for the host institution to designate two people as co-Program Chairperson(s). The Program Chairperson will coordinate the program for the Annual Meeting.
- b. The Program Committee shall:
 1. Recommend the time and place of future Annual Meetings, preferably two years in advance, subject to the approval of the Executive Committee. At the request of the host institution, the Program Committee, in coordination with the Executive Committee is empowered to change the time or place of a scheduled meeting, and
 2. Plan the program of the Annual Meeting and, in conjunction with the Arrangements Committee (if one should exist) at the host institution, bear the responsibility for its production.
2. The Nominating Committee will consist of three persons, not including ex-officio members, each appointed for a three-year term on a rotating basis, one appointed each year starting in 2015. Each member will serve as Chairperson during his or her second year of office. At least one and one-half months prior to an election, the Nominating Committee shall provide a list of candidates for distribution to the members of the Section. This shall not prevent other nominations being made from the floor at the time of the election. The Chair of the Nominating Committee (or another member of the Nominating Committee if the Chair is absent) will be responsible for conducting elections at the Business Meeting. Elections will be conducted by secret paper ballot. Any candidates present will be given the opportunity to speak for a few minutes. There will be a call for any nominations from the floor. Only current members of the MAA may vote in elections. The Chair of the Nominating Committee will record the vote and announce the results of the election prior to the end of the Business Meeting. Candidates receiving the highest number of votes win. In the event of a tie, the Executive Committee members present at the Business Meeting will decide how to break the tie to determine the winner of the election.
3. The Teaching Award Committee is chaired by the Chair-Elect or Past Chair and also includes the previous year recipient of the Burton W. Jones Teaching Award and another member of the section appointed by the Chair of the section. The committee is responsible for making a recommendation to the Executive Committee for the next recipient of the Burton W. Jones Teaching Award and any other teaching awards given by the section.
4. The Section Activity Grant Award Committee is chaired by the Chair-Elect or Past Chair and also includes two members of the section who are not members of the Executive Committee. One of these members is selected by the Section Governor and the other by the Section Chair. This committee is charged with reviewing and evaluating proposals for section activity grants in accordance with the goals of the section and recommending funding levels to the Executive Committee. The total amount and amount per project of grant support is determined by the Executive Committee.

ARTICLE VII Amendments

1. These by-laws may be amended by 2/3 of the votes cast by the members at the annual business meeting or a Special Meeting of the Section, provided that at least 12 votes have been cast, subject to the approval of the Board of Governors of the Mathematical Association of America. A proposed

amendment shall be made available to every member of the Section at least twenty days prior to the meeting at which the voting on the amendment will take place.

2. A complete revision of this set of by-laws will be subject to the same procedure as that for amending this set.