www.MAA.ORG

Fall 2013 Newsletter

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

Fall 2013 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/fall2013news.pdf

Table of Contents

Section Executive Committee Officers for 2013 – 2014

Chair
William Cherowitzo
University of Colorado Denver
Denver, CO 80217
william.cherowitzo@ucdenver.edu
303-556-8381

Chair Elect
Kyle Riley
South Dakota School of Mines and Technology
Rapid City, SD 57701
kyle.riley@sdsmt.edu
605-394-2471

Vice-Chair
Erica Marlys Hastert
CCCOnline
erica.hastert@cccs.edu
720-858-2334

Secretary/ Treasurer
Heidi Keck
Western State Colorado University
Gunnison, CO 81231
hkeck@western.edu
970-943-3167

Governor
Mike Brilleslyper
USAFA
Colorado Springs, CO 80840
mike.brilleslyper@usafa.edu
719-333-9514

Program Co-Chairs
Lynne Ipina
Chris Hall
University of Wyoming
Laramie, WY 82071
ipina@uwyo.edu
chall14@uwyo.edu
307-766-4242; 307-766-2318

Other Committee Members and Representatives

Section Nominating Committee
Lynne Ipina, University of Wyoming — ipina@uwyo.edu
Jeff Berg, ACC — jeff.berg@arapahoe.edu

Awards Selection Committee
Kyle Riley, (Chair), SDSMT — kyle.riley@sdsmt.edu
Erica Marlys Hastert, CCCOnline — erica.hastert@cccs.edu
Marlow Anderson, Colorado College — manderson@coloradocollege.edu
Stan Payne, UCD — stanley.payne@ucdenver.edu

Section NExT Committee
Diane Davis (Co-Chair), MSU Denver — ddavi102@msudenver.edu
Bob Cohen (Co-Chair), WSCU — rcohen@western.edu
Kim Fix, WSCU — kfix@western.edu

Section Book Sales Coordinator
Janet Heine Barnett, CSU - Pueblo — janet.barnett@colostate-pueblo.edu

Section Student Activity Coordinator
Carl Lienert, Fort Lewis College — lienert_c@fortlewis.edu
Beth Schaubroeck, USAFA — beth.schaubroeck@usafa.edu

Higher Education Representative on CCTM Governing Board
     Gulden Karakok, University of Northern Colorado   gulden.karakok@unco.edu

Public Information Officer and Section Liaison Coordinator
     Heidi Keck, Western State Colorado University   hkeck@western.edu

Website Editor
     Bill Briggs   william.briggs@ucdenver.edu
     University of Colorado Denver

Newsletter Editor
     Linda Sundbye   sundbyel@msudenver.edu
     Metropolitan State University of Denver   303-556-8437
     Department of Mathematical and Computer Sciences
     P. O. Box 173362, Campus Box 38   FAX: 303-556-5381
     Denver, CO 80217-3362

Marlow Anderson
of
Colorado College
named
2013 Distinguished Teacher

In 1991, the MAA Board of Governors established Section Awards for Distinguished College or University Teaching to recognize excellence in mathematics teaching at the post-secondary level. The Rocky Mountain Section Award is named in honor of Burton W. Jones, a lifelong advocate of excellence in teaching and supporter of the members and programs of the MAA. This year's award winner is **Dr. Marlow Anderson** of Colorado College. In addition to receiving a certificate and a check, Professor Anderson will deliver the opening address at next year's spring meeting and become the Section Nominee for the Deborah and Franklin Haimo Awards for Distinguished College or University Teaching of Mathematics.

The criteria for the award are superior teaching effectiveness where "teaching" is interpreted in the broadest sense, ability to generate excitement about mathematics in students, recognition of extraordinary success at the post-secondary level, and influence in teaching both within and beyond the local institution and community.

Dr. Anderson has been teaching at Colorado College for the past 30 years. He sets the standard for offering demanding, wide-ranging, beautiful courses in a department whose faculty members take pride in effectively teaching rigorous courses across the curriculum. He has also recently taught adventurous cross-disciplinary "World of Numbers" courses, while spearheading the effort in the department to develop multi-disciplinary "First Year Experience" courses. His classes are richly blended with interesting visual computer algebra presentations, group work, problem-solving at the board, and interactive presentations. Those that have witnessed Dr. Anderson's classes have noted the dynamic cloud of chalk dust always in the air just a short distance away from Dr. Anderson, who manages to outrun the apparition while moving from one student group to the next. His students have fun, work hard and make great leaps forward. Dr. Anderson is a teacher/scholar completely devoted to their understanding and enjoyment of mathematics.

Dr. Anderson's passion for teaching goes well beyond the classroom. Many of his "non-teaching blocks" are busy with one or more independent studies. He directs more independent study projects than anyone else in the Colorado College Mathematics Department. His students deeply sense his commitment to their learning and his love of mathematics. Dr. Anderson has been an inspiration to the community of mathematics teachers and students at Colorado College and beyond for many years.

Dr. Anderson's breadth and depth of mathematical understanding are also in evidence in the numerous books he has edited or written. He has long been an advocate on the international level for the importance of the History of Mathematics in all mathematics courses and has published several important history collections through the Mathematical Association of America with renowned colleagues Victor Katz and Robin Wilson. All of Dr. Anderson's courses have significant history components, and his students have come to expect rich mathematical stories alongside the rigorous presentation of material. He has also written an advanced theoretical book on Lattice Ordered Groups (with Todd Feil) and the remarkable "rings first" Abstract Algebra book (also with Todd Feil). Dr. Anderson's eclectic interests in the application of mathematics are in evidence in the book he published last year on the Physics of Scuba Diving. This book is based on yet another of his imaginative courses.

Dr. Anderson is an extraordinary teacher and scholar who profoundly connects with "students" at all levels – from First Year students anxiously taking their first college mathematics course to colleagues working on open problems seemingly far from his research area. Dr. Anderson is a most worthy recipient of the Burton W. Jones Distinguished Teaching Award.

We wish to thank **Mike Siddoway** (Colorado College) for the time and effort he put into preparing the dossier for Dr. Anderson upon which we have heavily relied in preparing this report.

Daluss Siewert
Black Hills State University
Chair DTA Selection Committee

Past Burton W. Jones DTA Recipients

1992 John H. "Jack" Hodges
University of Colorado at Boulder
1993 Gerald Diaz
United States Air Force Academy
1994 A. Duane Porter
University of Wyoming
1995 William D. Emerson
Metropolitan State College of Denver
1996 Zenas Hartvigson
University of Colorado Denver
1997 Thomas Kelley
Metropolitan State College of Denver
1998 Monte Zerger
Adams State College
1999 Bill Briggs
University of Colorado Denver
2000 Barbara Bath
Colorado School of Mines
2001 Jim Loats
Metropolitan State College of Denver
2002 Gene Abrams
University of Colorado at Colorado Springs
2003 Hugh King
Colorado School of Mines
2004 Don Teets
South Dakota School of Mines and Technology
2005 Bryan Shader
University of Wyoming
2006 Barbara Moskal
Colorado School of Mines
2007 Lynne Ipiña
University of Wyoming
2008 Steven Janke
Colorado College
2009 Richard Grassl
University of Northern Colorado
2010 Eric Stade
University of Colorado at Boulder
2011 Rich Bogdanovich
Community College of Aurora
2012 Janet Nichols
Colorado State University – Pueblo
2013 Marlow Anderson
Colorado College

2014 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 becomes 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 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 **1 December 2013**. **Complete nomination materials** (described on the website) are due **15 January 2014**.

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.

Chair's Report

I am writing this as the flood waters recede in Colorado and I sincerely hope that you and your family and friends have been unharmed by this devastating event. At times like this I get into a reflective mood and contemplate some of the

bigger issues that life has to offer. Faced with the raw and untamed power that Mother Nature so casually displayed, it would be easy to fall into despair over our seemingly puny efforts to bend her to our will. This would be a mistake. Although Nature won some skirmishes in this latest round of an eternal struggle, we are far from defeated. There is hope in the bigger picture when we consider how many dams did not fail, how many bridges withstood the onslaught and how many lives were not lost! Our science and technology, while far from perfect, have enabled us to face Mother Nature's fury without recoiling in terror. Those of us in academic pursuits have played our role in training the scientists and engineers who have made this possible. While I must admit that in jest I have often said that I would be loath to cross a bridge designed by someone who barely got a "C" in one of my calculus classes, I do think that we have done well in providing these folks with the tools they need to turn abstractions into realities. Future advances will require more from them, and in turn, more from us … more tools, deeper understandings, higher efficiencies. We are part of the infrastructure in this battle with Nature and we must ensure that our contributions are strengthened and reliable.

In a bit more down to earth vein, there have been a few personnel changes in the Rocky Mountain section which I would like to recognize. To start, congratulations to **Kyle Riley** (South Dakota School of Mines and Technology) who was elected to be Chair-elect at our last business meeting. This year Kyle will be chairing the section's Award Selection Committee as well. Also new to the executive committee is Vice-chair **Erica Marlys Hastert** (CCCOnline) who volunteered to finish out the term of **Sue Norris**, who has now taken a position in Iowa. We wish Sue the best and I am eagerly looking forward to working with Erica, especially on matters concerning our two-year institutions. Finally, a shout-out to last year's Burton Jones Distinguished Teaching Award winner **Marlow Anderson** (Colorado College) who automatically gets a seat on the Award Selection Committee for this year.

As with any member-supported organization, when the numbers go down anxiety goes up. The national MAA organization is reporting a drop in membership and is asking sections for ideas on how to increase local memberships. As I've stated several times, I would like to see an increase in our membership in the community college area, but our outreach efforts should not stop there. To join an organization, individuals need to see some tangible benefit in doing so. What are the benefits to you? By letting others know what these are you could entice them to join. Are there activities that the Rocky Mountain section can get involved with which will attract new members? If you can think of something, let an executive committee member know.

2015 marks the MAA's Centennial Year and Mathfest 2015 will be beefed up to celebrate this. We are being asked to commemorate the occasion at our own spring 2015 meeting. Any ideas concerning what we should do are welcome.

I want to encourage members of the section to consider nominating colleagues for the Burton Jones Distinguished Teaching Award. There are many in the section that are deserving of this award but won't get it because they weren't nominated. We are trying to make the nominating procedure easier in order to get more nominations. We will also be "rolling over" unsuccessful nominations for three years to improve the chances that a deserving candidate is not overlooked. There has also been talk of setting up a separate "early career" award.

Work on redesigning our web page continues. Many thanks go to **George Heine** and **Janet Barnett** for their efforts.

Finally, we are in need of volunteers to serve on various nominating committees. Please step up to the plate by letting me know that you are interested (William.cherowitzo@ucdenver.edu).

Bill Cherowitzo, UCD
Chair, Rocky Mountain Section

Governor's Report

I attended the Board of Governor's (BoG) meeting at Mathfest in Hartford, CT this year. Traveling to the northeast reminds me how lucky we are to live and work in the Rocky Mountain region. While there are some fascinating things to see and do in the east, I wouldn't trade it for our scenery, wide open spaces, and wonderful lack of humidity.

The BoG was rather uneventful this time. The main items of discussion focused on the new membership structure and the issue of obtaining new members and keeping current

members. Of course there was the usual discussion about the budget and deficits, but financially speaking, we are not doing too badly. Below is a summary of some of the discussion items that may be of interest to our section members.

The Board voted to dissolve the joint MAA-AMS committee on mathematicians with disabilities. Two of the MAA councils will work towards addressing these issues within the current MAA committee structure.

Prior to the Board meeting there was some discussion about the AK-OK Bylaws and the perception that the proposed bylaws were not in sync with MAA national guidelines regarding the new rules for the Haimo award. This prompted the Board to recommend that sections should adhere to the statement on avoiding implicit bias when determining procedures for committee membership and award selection. Bylaws should be written so that practices do not randomly change over time.

It was noted that some sections have been remiss in meeting deadlines for required reports to the national office. To encourage more timeliness, the national office will start withholding subvention money if reports are not submitted. I'm sure this does not apply to the RMS.

It was reported that MAA book sales continue to do well, particularly MAA e-books. It was also announced that after many years of service, **Don Albers** is stepping down as head of MAA books. He received a standing ovation at the meeting.

MAA Treasurer, **Jim Daniels**, had nothing new to report from the last budget report. The proposed 2014 budget was approved after some clarification about new cash accounting methods for book sales. I just have to comment that it is often believed that mathematicians have a "head for figures," but I'm pretty sure that does not apply to accounting methods—that is a language and topic far, far away from a nice eigenvalue problem, which I'm sure is much easier to understand!

Regarding the finances of the MAA, the outside auditing agency returned a clean bill of health for our organization. It was noted that the MAA has a good diversity of revenue streams and minimal debt. However, the MAA is still running an operating deficit of 2 – 3% of operating budget. This situation is not sustainable and the organization needs to continue to find ways to cut costs and increase revenue.

Probably the highlight of the financial discussions was when our own **Hortensia Soto-Johnson** (University of Northern Colorado) made her debut as Associate Treasurer of the MAA. She gave her report on the budget and fielded questions like a financial pro. It's nice to have important people in our own section!

As I mentioned, much of the meeting was spent discussing declining memberships and how the MAA should respond. This was also the topic of our lunchtime breakout sessions. Several issues and goals emerged from the discussion. Some of the points are listed below:

- The MAA has a new simplified membership structure.
- The goal is to reverse trends—we want to increase or stabilize the membership.
- It was observed that there has been a cultural shift over time where it is no longer an expectation for faculty members to support their professional organizations.
- There was a very general question about recruitment. How and what from pools should the MAA attempt to recruit new members?
- The new MAA website is the key to delivering content and benefits to members. The MAA will increasingly have members that do not travel to meetings and have little or no travel support from their home institutions.
- The MAA must develop new membership acquisition and lapsed-member reinstatement programs.
- Perhaps most important, the MAA must market itself as the voice of college mathematics. We must build awareness of the MAA nationwide.

If you have any ideas regarding these issues, please send them my way. I can be reached at mike.brilleslyper@usafa.edu.

As the fall semester rolls along, please think how the MAA can help you in your teaching and scholarship, and how you can give back to the mathematics community through participation with the MAA. It is a great organization and it is a privilege to represent the Rocky Mountain section.

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

18th Annual Colorado Mathematics Awards Ceremony/Reception

The 18th annual Colorado Mathematics Awards (CMA) Reception/Ceremony was held on Thursday, May 16 at the Grant-Humphreys Mansion in Denver. Organized by **Dick Gibbs**, Emeritus Professor of Mathematics at Fort Lewis College, and **David Carlson** of the Colorado Department of Agriculture (retired), this event recognized 46 Colorado students and 30 teachers from junior and senior high schools, and colleges and universities in Colorado for outstanding performances on six national mathematics competitions: MATHCOUNTS, the American Mathematics Contests 8, 10 and 12, the William Lowell Putnam Mathematical Competition, and the Mathematical Contest in Modeling.

The AMC 8, AMC 10, AMC 12, and Putnam Competitions are sponsored programs of the national MAA, which also provides support for the other two competitions. **Mr. Rich Morrow**, retired mathematics teacher from Denver's Challenge School, spoke to the gathering before awards were given. Rich was the teacher/coach of many past awardees.

The Rocky Mountain Section of the MAA is an educational sponsor of the Colorado Mathematics Awards. Other MAA members on the CMA Steering Committee include **David Larue** (Mines) and **Lou Talman** (MSU Denver). Special thanks to **Silva Chang** from Boulder for maintaining CMA information on her website: **cma.coloradomath.org**. Pictures of this year's event (and of prior years) can be found there.

Colorado students teams excelled in this year's Mathematical Contest in Modeling. Of the 5.636 teams participating in this worldwide contest, only eleven received the top "Outstanding" designation. And three of these eleven teams were from Colorado! Furthermore (yes, there's more!) each team received one of eight "named" sponsor awards. Two of the teams were from the University of Colorado-Boulder and one was from Colorado College. Members of the two CU-B teams, both coached by Prof. **Anne Dougherty**, Dept. of Applied Mathematics, are: **Yueh-Ya Hsu**, **Gregory McQuie**, and **David Thomas** (SIAM Award winner); and **Christopher Aicher**, **Tracy Babb**, and **Fiona Pigott** (MAA Award winner). Members of the CC team, coached by Prof. **Andrea Bruder,** were **Namgyal Angmo, Yukiko Iwasaki,** and **Aradhya Sood** (Giordano Award winner).

There was a two-way tie for the top Colorado score on the Putnam Mathematical Competition. UC-B students **Christopher Aicher** and **Daniel Bragg** tied for first place. **Kenneth Macneal** from **DU** placed third. Also recognized at the ceremony was Prof. **Marlow Anderson** from Colorado College as the recipient of the 2013 Burton W. Jones Distinguished Teaching Award.

Special thanks to the CMA Steering Committee for identifying and recognizing these outstanding young mathematicians and faculty.

Plans are already under way for the 19th Colorado Mathematics Awards Reception/Ceremony to be held again at the Grant-Humphreys Mansion on Tuesday, May 13, 2014.

Dick Gibbs
Emeritus Professor of Mathematics
Fort Lewis College

Section News

Arapahoe Community College

The ACC Mathematics Department welcomes two new fulltime faculty members, **Danielle Staples** and **Nancy Resseguie**, bringing the department to a total of eleven fulltime members. Danielle Staples earned a Bachelor of Science in Mathematics Education from Urbana University and a Master of Education in Curriculum and Instruction from William Woods University and has been teaching at the community college level for 8 years. Nancy Resseguie earned a Bachelor of Science from Nebraska Wesleyan University and a Master of Arts, Mathematics from the University of Kansas and has an interest in developmental mathematics education and statistics.

The department is responding to a Colorado statewide initiative to redesign developmental mathematics education. Recommendations at http://www.cccs.edu/Docs/dev-ed/DETF_Recommendations_complete.pdf are directing departmental efforts. A goal of the redesign is to accelerate students by reducing the amount of time, number of developmental credits, and number of courses in the

developmental sequence so students can be successful in a college level course. As part of the redesign, community colleges will offer students pathways to college level mathematics courses and students will choose their path based on their career or major area of interest. Students earning minimum assessment scores could prepare for college level courses like Mathematics for Liberal Arts or Statistics in one semester and college level courses like College Algebra and Finite Mathematics in two semesters or less.

Black Hills State University

We have three new tenure-track hires and one new instructor at Black Hills State University.

Colin Garnett who recently completed a post-doc at the University of Victoria, B.C. was hired as a tenure-track assistant professor. Colin has a Ph.D. in Mathematics from the University of Wyoming and a B.A. in Mathematics from Willamette University. Colin's research interests are in qualitative matrix theory, combinatorial matrix theory, graph theory, and linear algebra.

Hui Ma was a visiting instructor at BHSU last year and is now in a tenure-track assistant professor position. Hui completed her Ph.D. in Applied Mathematics and her M.S. in Mathematics at the University of Alabama at Birmingham. Hui has a B.S. degree in Mathematics and Applied Mathematics from Yancheng Teacher's College, Jiangsu, China. Hui's research is on the geometric fitting of quadratic curves and surfaces.

Daniel May was hired as a tenure-track assistant professor. Daniel has a Ph.D. and M.S. in Mathematics from University of Wyoming and a B.S. in Mathematics from Montana State University. Daniel served as a visiting assistant professor at Eastern Oregon University and Lewis Clark State College before coming to BHSU. Daniel's research focuses on mutually unbiased bases, in particular, automorphisms of the standard construction of mutually unbiased bases.

We also have hired **Jill Trimble** as a lecturer. Jill has served South Dakota School of Mines & Technology as a mathematics instructor for the past 13 years. Jill has a M.S. in Statistics from Montana State University and a B.S. in Mathematics from Black Hills State University. We are very pleased to have these four new colleagues join our department and we expect they will soon become actively involved in the Rocky Mountain Section of the MAA.

Colorado School of Mines

Professor **Willy Hereman** continues as Head of the Department of Applied Mathematics and Statistics (AMS). Teaching Associate Professor **Deb Carney** is the new Assistant Department Head and Professor **Barbara Moskal** (Director of the Trefny Institute for Educational Innovation) continues as liaison with the MAA.

This fall, the department welcomes two new faculty members which brings the department to a total of 21 faculty members.
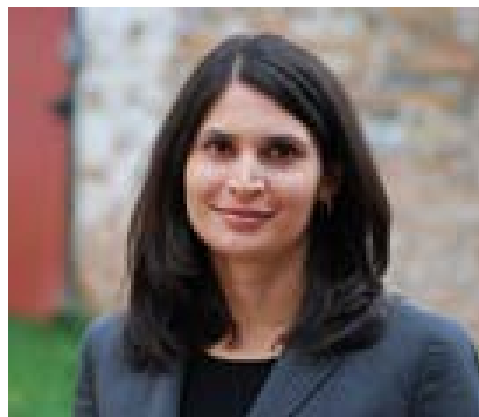
Dr. **Cecilia Diniz Behn** joined the department as an Assistant Professor. She earned an A.B. in Mathematics from Bryn Mawr College an, M.A. in Mathematics from the University of Texas, Austin, and a Ph.D. in Mathematics from Boston University. She completed a Postdoctoral Fellowship in the Division of Sleep Medicine at Harvard Medical School and spent four years as a Term Assistant Professor at the University of Michigan. Before joining the faculty at Mines, Cecilia held a tenure-track position at Gettysburg College.

Cecilia's research interests focus on mathematical modeling of the dynamics of sleep-wake behavior. She has developed a research program focused on the application of mathematical modeling and analysis to key open questions in sleep research. Her research has been funded by the National Science Foundation and the Air Force Office of Scientific Research. She enjoys teaching mathematical biology and nonlinear dynamics, and introducing students to the joys and challenges of interdisciplinary research.

Dr. **Paul Constantine** joined the department as a Ben L. Fryrear Assistant Professor. He received his Ph.D. from Stanford University's Institute for Computational and Mathematical Engineering in 2009. He was subsequently awarded the John von Neumann Research Fellowship in Computational Science at Sandia National Laboratories. After two years in Albuquerque, he returned to Stanford as a postdoc in the Center for Turbulence Research.

Paul's research interests fall in the category of *uncertainty quantification*, which attempts to formulate and compute measures of confidence for physics and engineering simulations---analogous to confidence measures from physical experiments. In this context, he has developed methods for dimension reduction and reduced order modeling that find cheap and accurate approximations to costly simulations.

Prof. **Viktor Mykhas'kiv** is a Fullbright Visiting Professor in the AMS department for calendar year 2013. Viktor is the Head of the Department of Computational Mechanics and Deformable Solids at the Pidstryhach Institute of Applied Problems in Mechanics and Mathematics (National Academy of Ukraine, Ukraine). He works on wave propagation problems, boundary integral equation and boundary element methods, potential theory, and regularization methods. He also has an interest in fracture mechanics and mechanics of composites.

Teaching Professor **Scott Strong** received the CMS Alumni Teaching Award and Professor **William Navidi** was named AMS Faculty of the Year. **Deb Carney** has been selected as a Mines representative to the Academic Management Institute for AY 2013-14.

In December 2012, the Outstanding Graduating Senior Award was awarded to **Shad Allen** and the Professor Everett Award was awarded to **Caroline Woody**. In May 2013, **Dylan Denning** (Computational and Applied Mathematics) and **Lindsay Parr** (Statistics) received the AMS Outstanding Graduating Senior Awards. Also in May, the Professor Everett Award was awarded to **Karen Moxcey**. Physics student **Linnea Jones** was the recipient of the Ryan Sayers Memorial Award and **Eric Jones** was awarded the Ryan Sayers Memorial Scholarship for AY 2012-13.

Also in student news: Out of the six students at CSM taking the Putnam exam in December 2012, one student scored 11, four students scored 10, and one scored 0. With a team score of 51, Mines ranked 97 out of 402, putting Mines in the top 25% of schools competing in the exam. Congratulations to the students who participated and to team leaders **Rebekah Swanson** and **Stephen Pankavich** for running the weekly Putnam seminar.

Colorado State University

The department hired two new tenure track faculty members:

Paul Johnson, hired in Spring 2012 (delayed start date, just start this fall) Area; Algebraic Geometry.

Mary Pilgrim, hired in Spring 2013. Area: Mathematics Education.

FYI: Math Day is canceled in Fall 2013 due to renovation of the Lory Student Center. It will be continued in Fall 2014.

Metropolitan State University of Denver

Our esteemed colleague Dr. **Larry Johnson** passed away on September 11, 2013. He served as Director of the Summer Science Institute and Center for Math, Science and Environmental Education, and formerly served as department chair and dean of the School of Letters, Arts and Sciences. He was recently honored at the 2013 Welcome Back Breakfast for 30 years of service to MSU Denver. He was the campus coordinator for the Louis Stokes Colorado Alliance for Minority Participation (COAMP) grant at MSU Denver.

Connie Novicoff, director of our Peer Study program will be retiring at the end of October. Associate Director **Jean Ethredge** will taking

over the director's position and we are in the hiring process to hire a new associate director.

Our new Department chair is Dr. **Lindsay Packer**.

Our department is pleased to welcome the following new faculty:

Dr. **Chris Harder,** in Applied Mathematics, received his BS in mathematics from MSU Denver and his PhD in Applied Mathematics from the University of Colorado Denver. He just completed a post-doc in computational science at a national lab in Rio de Janeiro.

Dr. **Elizabeth McClellan,** in Statistics, received her BS in mathematics from the University of North Texas, her MS and PhD in Statistics from Southern Methodist University. She has just completed a three year post-doc as a scientific researcher at the Erasmus Medical Center in Rotterdam, Netherlands.

Computer Science lecturer, **David Kramer** has a BS in Mathematics from City College of New York and an MS in Computer Science from the Weizmann Institute of Science in Rechovet, Israel.

Supplemental Instruction Coordinator **Kellie Zolnikov** has an MS in Mathematics from Claremont Graduate University. She will be working with students and faculty to develop and incorporate innovative teaching methods into courses.

South Dakota School of Mines and Technology

Enrollment continues to grow. We are on track to have another increase in enrollment of around five percent, and we had a five percent increase last year. Our faculty also has been growing with an addition of an instructor position and a new instructor hired to replace a faculty member that left. Dr. **William Long** joins us from North Idaho Community College and **Debra Bienert** joins our department from Berkshire Community College. The curriculum is also changing and our math program has added a new Data Analysis course, which is a class we hope will attract both our majors and students from outside the major. Lastly, we had a good showing in the Putnam last year with four out of our nine students scoring nonzero.

United States Air Force Academy

The mathematics department is very pleased to welcome Dr. **Ian Pierce** and his family to our faculty. Dr. Pierce received his Ph.D. from the University of Nebraska and he spent the past two years as a visiting professor at St. Olaf College in Minnesota. Dr. Pierce is the first civilian faculty member hired in our department since 2004. He brings a strong presence to the classroom and is eager to serve the mathematics community. We look forward to his future involvement in the Rocky Mountain section.

This fall, the mathematics department started offering a degree in applied mathematics. We are excited about this program and we currently have twenty-six sophomores who have signed up for the major. While still being a rigorous math degree, the program also requires a four-course interdisciplinary sequence in a related field. We have partnered with other academic departments to develop many possible four-course sequences including concentrations in physics, chemistry, biology, economics, computer science, and several of the engineering programs.

Our most recent graduating class of math majors (2013) performed very well with seven of the nineteen graduates going directly to prestigious graduate school programs at MIT, University of Washington, University of Wisconsin, and the Air Force Institute of Technology. The other twelve have gone directly into exciting jobs in the Air Force, with several now in pilot training.

The Academy saw several changes this summer in the leadership of the institution. After nine years as Dean, Brigadier General **Dana Born** retired and has taken a position at the JFK School of Government at Harvard. Our new Dean is Brigadier General **Andy Armacost**, who holds a Ph.D. in Operations Research from MIT. The Academy also welcomed its first female Superintendent, Lieutenant General **Michelle Johnson** (USAFA class of 1981).

University of Colorado at Boulder

David Grant is the new chair of the Math Department.

We've hired a former graduate Dr. **Faan Tone Liu** as our new Calc I and II Czar, officially our Calculus Program Coordinator, who will be overseeing all our many small section calculus courses. Faan Tone has taught at Williams, and Amherst, and Rhodes, and DU and we're thrilled to have her onboard.

We're hiring this year in Probability.

13

We're hoping to increase our outreach activities, and have put **Eric Stade** in charge of our new outreach committee (all should feel free to contact him with outreach opportunities.)

University of Colorado – Colorado Springs

This year Dr. **George Rus** won an Outstanding Teaching award as a full time Instructor in the College of Letters, Arts, and Sciences at UCCS. Also Dr. **Barbara Prinari** and Dr. **Radu Cascaval** are co-organizing the 11th annual Pikes Peak Regional Undergraduate Math Conference (PPRUMC) to be held at UCCS on Saturday, Feb. 15, 2014. Funding for this conference has been granted by the NSF RUMC program. Please note that the date is the third Saturday in February this year.

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

---

11th Annual
Pikes Peak Regional
Undergraduate Mathematics
Conference
University of Colorado
Colorado Springs
Saturday, February 15, 2014

Please mark your calendars for the next PPRUMC! 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, including graduate school and career opportunities.

The conference program will feature talks by students, a keynote speaker, and a panel discussion on careers and graduate school. Based on recent attendance, we expect several dozen student presenters and over one hundred attendees from Colorado, Wyoming and other neighboring states. 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 featuring pizza and games is also planned for Friday evening prior to Saturday's full-day conference.

Given the earlier date (the third, instead of the fourth Saturday in February), 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. Each student presenter will give a 20-minute talk. The deadline for submitting an abstract will be approximately January 26, 2014.

Further details and registration information will be available later this fall through a conference website. Information is also available by contacting Dr. **Barbara Prinari**, bprinari@uccs.edu or (719) 255 - 3522.

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

A Message from your MAA Higher Ed Liaison to the CCTM

The 2013 CCTM Conference, *Navigating New Standards Charting New Practices*, will be held at the Denver Merchandise Mart, on October 10-11, 2013. The pre-session on Thursday, October 10, 2013 will focus on the PARCC Assessment and utilizing related recourses. Friday's keynote speaker, Prof. **Ellen Whitesides** from University of Arizona, will share thoughts about how the Common Core State Standards can serve as a compass for student understanding, teacher collaboration, and future possibilities for America. Online registration is available until October 2nd, 2013. For full conference program and online registration visit the CCTM website: http://www.cctmath.org

Gulden Karakok, CCTM Liaison

Student Activities

Students and Advisors: Attending the section meeting is a great way to meet students from other schools, attend talks where you may learn some new and interesting mathematics, and even present the results of your own research! Start thinking now about a presentation topic for the April 2014 conference at the University of Wyoming in Laramie.

Beth Schaubroeck, USAFA
Carl Lienert, Fort Lewis College
Section Student Activity Coordinators

Section Nominating Committee Report

The nominating committee is seeking candidates for three positions with elections planned for the spring of 2014. The three positions are:

1) Governor (3 year term)
2) Secretary/Treasurer (3 year term)
3) Vice-Chair (2 year term – representative shall be associated with a two-year school)

The duties of each position can be found in the section bylaws at
http://sections.maa.org/rockymt/ByLaws_08.pdf
and are summarized toward the end of the document at
http://sections.maa.org/rockymt/Misc_08.pdf. If you are interested in serving, or if you know of a section member who might help the section through service in any of these positions, please contact **Jeff Berg** (jeff.berg@arapahoe.edu) or **Lynne Ipina** (ipina@uwyo.edu).

The University of Wyoming
to Host the 2014 Meeting
March 28-29, 2014

The 2014 Rocky Mountain Section Meeting will be held at the University of Wyoming in Laramie on March 28 and 29, 2014.

A meeting website is currently being developed. Please check the Rocky Mountain Section Website at http://sections.maa.org/rockymt/ for further meeting updates and access to the meeting website, once it becomes available. Registration information, a list of invited speakers, lodging, maps and abstract submission information will be forthcoming.

SESSION PROPOSAL SUBMISSIONS

An invitation to attend the meeting and contribute is extended to all mathematicians and anyone interested in mathematics, particularly mathematics teachers at all levels including middle school, high school and college, as well as high school, undergraduate and graduate students.

We are currently inviting proposals for organizing parallel sessions and/or panel discussion topics in all areas of mathematics. A typical session will consist of 4 – 9 talks of 20-25 minutes each.

Anyone interested, please submit session and panel discussion topic proposals to **Lynne Ipina** at ipina@uwyo.edu or **Chris Hall** at chall14@uwyo.edu.

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

Lynne Ipina at ipina@uwyo.edu

Chris Hall at chall14@uwyo.edu

2013 Section Meeting Report

The 2013 Annual Meeting of the Rocky Mountain Section of the MAA was held on April 26 and 27, 2013 at Adams State University (ASU) in Alamosa, Colorado. The meeting organizers were **Steve Aldrich** and **Matthew Iklé** (ASU). Nearly 100 people attended the meeting, including more than 30 graduate and undergraduate students. Other participants included academic faculty members, K-12 teachers, and several members of the business and industry sector.

The meeting officially opened on Friday at 1:00 PM, with a welcome message from Dr. **David Svaldi**, president of ASU. The program then started with a keynote lecture by the 2012 Burton W. Jones Distinguished Teacher Award Recipient, **Janet Nichols** (Colorado State University -- Pueblo), entitled '*Teaching at Colorado State University – Pueblo (aka USC) – The Road Well-Traveled*.'

Friday afternoon contributed paper sessions included History of Mathematics, Applied Mathematics, General Mathematics, multiple student research sessions, Teaching Innovations, and a special session on developmental pathways organized and presented by the Colorado Community College System. On Friday evening, the meeting participants enjoyed a fabulous Mexican buffet at Calvillo's Mexican Restaurante. After dinner, Dr. **Michael Pearson**, MAA Executive Director, gave an entertaining talk entitled *'Stirling's Formula: A Monthly* Habit.'*

The meeting resumed on Saturday morning with a sectional business meeting, followed by a second keynote by **Michael Pearson**, on '*Interpolation, Least Squares Approximations, Numerical Integration and Roots of Orthogonal Polynomials*.' The contributed paper sessions on Saturday morning included additional sessions on teaching innovations, history of mathematics, and applied mathematics, as well as additional sessions highlighting fascinating research by undergraduate and graduate students.

A book and software exhibit has operated throughout the meeting. We would like to acknowledge and thank the exhibitors who participated:

> **Janet Barnett**, representing MAA
> **George Heine**
> **Zim Olson,** Zim Mathematics

Finally, this meeting could not have been as successful as it was without the massive help of the faculty, staff and students of ASU and of the ACME (Adams Computer, Mathematics, and Engineering) club who catered the refreshments at Saturday's session. Many thanks to all those who helped organize this event.

Contributed Papers - 2013 Section Meeting

Π = Graduate Student
Ω = Undergraduate Student

General Session

Mike Brilleslyper & Beth Schaubroeck, U. S. Air Force Academy
Looking for Zeros on the Unit Circle

William Cherowitzo, University of Colorado at Denver
Wikipedia and Mathematics

Bruce N. Lundberg, Colorado State University – Pueblo
Tegmark's Embarrassment: Probability in "Fine-Tuning" and "Multiverse" Proposals

History of Mathematics

Janet Heine Barnett, Colorado State University – Pueblo
A Colorful Practitioner of Mathematics: Oliver Byrne, Esq.

Daniel Swenson, Black Hills State University
A very quick discussion of Hempel's Raven Paradox

George Heine, Math and Maps
Leonhard Euler's Contributions to Geodesy

Donald Teets, South Dakota School of Mines and Technology
Gauss's Computation of the Easter Date

Applied Mathematics

Ben Dyhr, Metropolitan State University of Denver
An Invariance Proof for 2-D Percolation

Hui Ma, Black Hills State University
Geometric Fitting of Quadratic Curves and Surfaces

Ana Vivas-Barber, Adams State University
Impacts of the Global Warming on the Spread of the West Nile Virus

Ivan Raykov, Colorado State University – Pueblo
Necessary and sufficient conditions for a minimum of optimization problems using Fitzpatrick functions

Shawn Robinson, Colorado Mesa University
An Algebro-geometric Approach to Unitary Space-Time Constellation Design

Andy Keck, Western State Colorado University
Starting Undergraduate Genomics Research

CCCS Developmental Math Pathways

Core Implementation Team (CIT) from the Colorado Community College System
The New Developmental Math Pathways at Colorado Community Colleges

Teaching Innovations

Shawn Robinson, Colorado Mesa University
A Guided IBL Introduction to Algebraic Geometry

Mona Mocanasu, Metropolitan State University of Denver
How Students Become Instructors – IBL Methods in Upper Division Math

Daluss Siewert, Black Hills State University
Transforming Developmental Mathematics Classes

Sue Norris, Northwest College
Comparing Performance in Developmental Math Classes: Computer Aided Instruction (ALEKS) versus Traditional Classroom

Bill Emerson, Metropolitan State University of Denver
Integration by Parts on my iPad

Student Research

Brandon Schoborg [Ω], *Western State Colorado University*
Congruence Numbers and Elliptic Curves

Phil DeOrsey [Π], University of Colorado Denver
Polar Coordinates and Finite Projective Planes

Crystal Rodabaugh [Ω], Adams State University
A Mathematical Model of the West Nile Virus in Colorado

Wes Shimamoto [Ω], Adams State University
Modeling Ball Trajectory in Billiards

Mary Worthley [Π], Colorado State University
A mixed methods explanatory study of the failure/drop rate for freshmen STEM calculus students

Yehui He [Ω] **and George Borleske** [Π], Colorado State University
Snow surface roughness characteristics assessed through geometry and meteorology

Jared Wright [Ω], Regis University
Sandpile Group of a Fused Cycle

Rebecca Roller [Ω], Western State Colorado University
Knots, Links, and Polynomials

Melody Dodd [Π], Colorado State University
An Introduction to Electrical Impedance Tomography

Emily Rose Jackson [Ω], Western State Colorado University
A Random Walk through Dimension: A Study in DLA

Charles Trintera [Ω], Western State Colorado University
Modeling the Evolution of Haploid-Diploid Life Cycles

Jacob Powell [Ω], Western State Colorado University
A method for using di-nucleotide frequencies in the detection of replication origins in bacteria

Joshua McNeely [Ω], Adams State University
Modeling with Matlab to solve 'Real Problems' for an Ordinary Differential Equations Course

Jennifer Maple [Π], Colorado State University
Steady State Hopf Mode Interaction in Anisotropic System

2013 Business Meeting Minutes
Saturday, April 27, 2013

Minutes: MAA Rocky Mountain Section Annual Business Meeting
Date: Saturday, April 27, 2013; 8:00-8:50 am
Location: Adams State University; Porter Hall 130

1. Bill Cherowitzo called the meeting to order and the minutes from last year were approved.
2. Reports:
   a. Jeff Berg led the election for Chair Elect. Statements from both Bill Emerson and Kyle Riley were attached to the agenda. Bill chose not to make a statement during the meeting to be fair to Kyle who was not present.
   b. Heidi Keck referred members to the attached financial report showing nearly $15,000 in reserve for the section.
   c. Bill Cherowitzo summarized the executive committee meeting. He described the 3-year rollover for DTA nominations, the funds distributed for CO Math Awards and Student Door Prizes. He also shared his goal of increasing 2-year college participation in the section. He is willing to travel to visit schools. He suggests a special session on 2-year college concerns at the next meeting. He also asked that suggestions for the new web page be sent directly to George Heine.
   d. Dick Gibbs reported on the various math competitions in Colorado including the Putnam Exam, the Mathematical Contest in Modeling, the American Mathematics Competition, and the Mathematics Olympiad. The awards ceremony is May 16 and Bill Cherowitzo presents the collegiate awards. Colorado students do well in these competitions.
   e. Mike Brilleslyper spoke on behalf of Beth Schaubroeck for the student activity grant. He explained the process and clarified that it was only for undergraduates.
   f. Michael Pearson gave the report from National. He explained the new membership structure with fewer categories, more emphasis on e-journals, and revised purpose of the FOCUS magazine as a "membership guide." The changes to book sales are related to new sales tax laws for e-commerce. He expects the new National web site to be a vast improvement over the old. He gave some highlights of the MathFest meeting in Hartford, including starting officially on Wednesdays now to reflect actual practice. He encouraged all section members to get involved in some way---meetings, SIGMAAs, Social networks, YouTube, NExT, PREP, committees---there is something for everyone. Mike Brilleslyper added that the sections are the "Heart and Soul" of the association and added his encouragement as well. As always, Mike is looking for ideas to take to the national office from the section.
   g. Dan Swenson explained that the Section NExT has been less active as there are very few new hires. The group hopes to have a strong cohort for next year and would like people to encourage their new hires to participate.
3. Announcements and Information Items
   a. Daluss Siewert   announced that Marlow Anderson from Colorado College is the 2013 Distinguished Teaching Award Recipient
   b. Gulden Karakok gave the correct dates for the CCTM meeting as October 10 & 11, 2013. There will be an emphasis on the Common Core Standards.
   c. There was a motion to thank Linda Sundbye for her work on the newsletter. It was approved unanimously and with a round of applause! The newsletter deadline is September 15
   d. Jeff Berg announced that Kyle Riley was elected as Chair Elect.
   e. Other
4. There was a motion to thank Adams State University
   Respectfully Submitted, ***Heidi Keck, Western State Colorado University***
   Secretary/Treasurer of the MAA Rocky Mountain Section

2013 Executive Committee Meeting Minutes
Friday, April 26, 2013

Minutes:　　　　　　MAA Rocky Mountain Section Executive Committee Meeting
Date & Time:　　　　Friday, April 26 at 9:15 – 11:40 am
Location:　　　　　　Adams State Uniuversity, Student Union Building, Room A130
Attendance:　　　　　Michael Pearson, Sue Norris, Bill Cherowitzo, Daluss Siewert,
　　　　　　　　　　　　Mike Brilleslyper, Heidi Keck, Matt Ickle, Steve Aldrich

1.　　　Bill Cherowitzo called the meeting to order. Daluss Siewert made a motion to approve the minutes from 2012, Mike Brilleslyper seconded. There was no discussion and the minutes were approved unanimously.

2　　　Bill Cherowitzo led a discussion of the meeting flow. Steve Aldrich described the location of all activities, vendors, and food. Michael Pearson explained the new book sales policy allowing online sales. The ASU department chair will lead the chairs lunch and the ASU president will deliver a welcome. The banquet order of events and business meeting order of events were acceptable as described in the agendas.

3.　　　Reports:
- Financial Report: The Section Activity Grant to Section NExT was not spent this year. The leadership of the Section NExT asked to carryover the money into the next academic year. Mike Brilleslyper made a motion to allow the carryover, Sue Norris seconded, and all approved the motion.
- Nominating Committee: Jeff Berg will lead the election for chair elect at the business meeting. There are two candidates, Kyle Riley and Bill Emerson. More importantly, there are three openings in 2014: Vice Chair, Secretary/Treasurer, and Governor. A general discuss followed on how to best recruit candidates for these positions. Heidi Keck and Bill Cherowitzo will work on an email to the members soliciting nominations and emphasizing the benefits of holding these positions.
- Awards Committee: Daluss Siewert reported on the Distinguished Teaching Award selection process. Few nominees is a problem. After some discussion, Mike Brilleslyper made a motion to automatically consider non-winning nominees for a 3-year period (with free meeting registration only for new nominees). Sue Norris seconded this motion and it was approved by all.

4.　　　Discussion and Action Items
- Bill Cherowitzo explained the Colorado Math Awards ceremony and the request from Dick Gibbs for $250. Daluss Siewert made a motion to approve this spending, Mike Brilleslyper seconded it, and all approved.
- The difference between activity awards and specific funding requests was discussed as part of the request for $100 for student door prizes at PPRUMC and MAA by Janet Barnett. The committee felt that they were separate ideas. Sue Norris made a motion to approve this spending, Daluss Siewert seconded, and all approved.
- Mike Brilleslyper clarified the sequestration problem affecting his job at the Air Force Academy. All felt that this was an extraordinary circumstance that would not require a policy change, and the consensus was that the section could help pay his travel to the spring meeting. Estimate of expense is $200.
- Sue Norris may leave the Rocky Mountain Section and would need to be replaced as Vice Chair. Bill Cherowitzo still wants increased 2-year college participation as a section goal. Several candidates were identified. Until Sue actually leaves the section, nothing will be done.

- George Heine has volunteered to redesign the section web page. Bill Briggs welcomes the change. Michael Pearson suggested that there are templates one could follow from other sections. Also book sales should be included. Can the history of the section be included somehow as well?
- Bill Cherowitzo and Mike Brilleslyper plan to attend MathFest in Hartford, Connecticut July 31—Aug 3, 2013. Michael Pearson reminded the committee that our subvention includes an addition $250 to help defray costs.
- Future Section Meetings were discussed. Tentatively they are these:
    - 2014: University of Wyoming with Lynne Ipina as program chair, dates TBD
    - 2015: Colorado College (not confirmed)
    - 2016: Colorado Mesa University?
    - 2017 CSU-Pueblo?
    - 2018: Fort Lewis?
- Michael Pearson questioned the committee about section goals. He suggested membership and attendance at meetings are challenges across the country and asked for ideas to boost these. As a larger problem, how can the MAA be a catalyst for conversations about STEM education? He expressed worry about the rise of for-profit education and general criticism of math teaching. He believes a goal for the section and the larger MAA should be to get our colleagues to join this conversation, to get invested in the MAA and provide a collective voice to respond to these challenges.

Respectfully submitted,
Heidi Keck, Western State Colorado University
Secretary/Treasurer of the MAA Rocky Mountain Section

MAA Rocky Mountain Section
Suggestions for Speakers

The Section offers the following suggestions which might be of assistance, *especially to first-timers*, during preparation of a talk for a Section Meeting.

1. The default talk length is 20 minutes, but longer times can be requested. Program organizers will attempt to provide the amount of time requested for your presentation, within the limitations of the program. Once you have been notified of the amount of time allotted, carefully prepare your presentation accordingly. If possible, plan to leave a few minutes at the end of your presentation for questions.

2. A presider will be assigned to facilitate each session of presentations. The presider 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 presider prior to the beginning of the session including your talk. Plan to bring about 30 handouts and be prepared to give attendees your 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 plan to present so much detailed material that your presentation becomes rushed. Focus on providing the audience with insight into your topic and its key notion during the presentation. Remember that very few members of the audience will be experts in the field you are discussing and that the audience will include some students.

5. The use of transparencies on an overhead projector greatly enhances the pace of a presentation. But make sure that notes on transparencies are written or typed in a font big enough and with spacing adequate to be seen clearly 50 to 100 feet away. Simply copying ordinary typewritten pages will not produce readable transparencies. Power Point or PDF presentations can serve a similar purpose in providing pacing for a talk, but be sure to check with program organizers concerning available technology and means of transferring data.

Grants Available

Section Activity Grants Program

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 Program

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

Joint Mathematics Meetings; Baltimore, MD
   January 15-18, 2014
ICTCM; San Antonio, TX
   March 20-23, 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
ICTCM; Las Vegas, NV
   March 12-15, 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

Joint Mathematics Meetings; Baltimore, MD
   January 16-19, 2019

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 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.