ROCKY MOUNTAIN SECTION OF THE MATHEMATICAL ASSOCIATION OF AMERICA

Fall 2022 Newsletter

Section Website: https://www.rockymountain.maa.org/

Note: The 2023 Rocky Mountain Section Meeting
April 21-22, 2023
Host: Black Hills State University

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2022 – 2023 Section Officers and Committee Members

Current term of service in parentheses; The Chair serves for 4 years – one as Chair Elect, two as Chair, one as Past Chair; All other positions are 1-year terms unless otherwise noted.

Section Executive Committee Officers for 2022 – 2023

Chair (2022-2024)	Gulden Karakok University of Northern Colorado Greeley, CO 80639	gulden.karakok@unco.edu 970-351-2215
Past Chair (2022-2023)	Dan Swenson Black Hills State University Spearfish, SD 57799	Daniel.Swenson@bhsu.edu 605-642-6425
Vice-Chair (2022-2024)	Carol Kuper Morgan Community College	carol.kuper@morgancc.edu 970-542-3202
Secretary/ Treasurer (2020-2023)	Mona Mocanasu MSU Denver Denver, CO	mmocanas@msudenver.edu 303-615-0747
MAA National Rep (2020-2023)	Tracii Friedman Colorado Mesa University GrandJunction, CO	tfriedma@coloradomesa.edu 970-248-1667
Program Co-Chairs (2022-2023)	Daluss Siewert Dan Swenson Black Hills State University, SD	daluss.siewert@bhsu.edu Daniel.Swenson@bhsu.edu 605-642-6425

Other Committee Members and Representatives

Section Nominating Committee

(2021-2024)	Janet Heine Barnett (Chair), CSU - Pueblo	janet.barnett@csupueblo.edu 719-549-2433
(2020-2023)	John Carter, MSU Denver	jcarte11@msudenver.edu 303-615-0726
(2022-2025)	Michael Jacobson, UC Denver	Michael.jacobson@ucdenver.edu 970-351-2297

DTA Awards Selection Committee

(2022-2023)	Dan Swenson, BHSU	Daniel.Swenson@bhsu.edu 605-642-6425
(2022-2023)	Robert Cohen, Western Colorado University	rcohen@western.edu 970-943-2111
(2022-2023)	Anne Dougherty, University of Colorado	anne.dougherty@colorado.edu
(2022-2024)	Brittni Lorton, CCD	Brittni.lorton@ccd.edu

ECTA Awards Selection Committee
(2022-2023)   Dan Swenson, BHSU   Daniel.Swenson@bhsu.edu
                                                                                605-642-6425
(2022-2023)   Michael Mikucki, Colorado School of Mines   mikucki@mines.edu
                                                                                303-273-3073
(2020-2023)   Anne Dougherty, University of Colorado   anne.dougherty@colorado.edu
(2022-2025)   Brittni Lorton, CCD   brittni.lorton@ccd.edu

Section Awards Coordinator
(2020-2023)   Kyle Riley, SDSMT   Kyle.Riley@sdsmt.edu
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Section Student Activity Coordinator
(2020-2023)   Divya Vernerey, UC Boulder   divya.vernerey@colorado.edu
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Higher Education Representative on CCTM Governing Board
(2021-2023)   Gulden Karakok, UNC   gulden.karakok@unco.edu
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Section NExT Committee
 (2022-2025)   Rebecca Swanson, Colorado School of Mines   swanson@mines.edu
                                                                                303-273-3813
               Mandi Schaeffer Fry, MSU Denver   aschaef6@msudenver.edu

Public Information Officer and Section Liaison Coordinator
(2020-2023)   Mona Mocanasu, MSU Denver   mmocanas@msudenver.edu
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Website Editor
(2021-2024)   Oscar Levin, University of Northern Colorado   Oscar.Levin@unco.edu
                                                                                970-351-2380

Newsletter Editor
(2022-2025)   Pam Peters, PPSC   pam.peters@ppcc.edu

Chair's Corner

Greetings to all of you in the Rocky Mountain Section of the MAA!

I hope that your fall term is getting off to a great start. The beginning of each academic year is always exciting, with new students coming learning their way around, and returning students with renewed enthusiasm to learn and grow.

It's been a busy year so far. As you know, following the AMS shift of the planned in-person Joint Math Meetings from January 2022 to a virtual meeting that conflicted with our original dates, we shifted our 2022 spring meeting to a new date, and to a virtual format. In spite of that, we had a great meeting and were able to take advantage of three MAA speaker programs. The Section Visitor Program (Jenny Quinn); the new MAA NAM Lecturer Program (Jose Perea); and the Editor Lecture Program (Dominic Klyve). We welcomed several board members from Colorado Council of Teachers of Mathematics (CCTM), who shared updates on Colorado K-12 math standards. And, our Section NExT organized an open workshop on mastery-based grading. For details on these and other great sessions from our Spring meeting, including links to video recordings of many of the sessions, visit the Spring 2022 meeting webpage.

I know you'll join me in thanking our colleagues at MSU Denver for their work in organizing this year's program, and also thank Hawkes Learning for providing the virtual meeting platform (and technical support throughout the meeting!).

I want to welcome Carol Kuper (Morgan Community College), who was elected Vice-Chair of the Section. Thanks to Carol for agreeing to serve in this important leadership role. In my experience, serving in such roles is both an opportunity to provide service to the section and our profession as well as for personal and professional growth. I invite you to volunteer to serve in one of the many available positions in the Rocky Mountain Section. We will have elections for three officers: Chairperson-elect, Secretary-Treasurer, and Section Representative to the MAA Congress. Please see the report from the Section Nominating Committee part in this newsletter for details. If you have suggestions – or are willing to serve in this capacity yourself – please contact Janet Barnett, the chair of the nominating committee.

I congratulate Linda Sundbye (MSU Denver), this year's Rocky Mountain Section recipient of the MAA 2022 Meritorious Service Award. In addition to her 16 years of service as the RMS newsletter editor, Linda has served the section in a variety of ways while devoting herself to encouraging student research and involvement in mathematics. Thank you, Linda.

I also congratulate this year's teaching award winners. Bob Cohen (Western Colorado University) and Michael Mikucki (Colorado School of Mines). Bob is the 29th recipient of the Burton W. Jones Distinguished Award for Distinguished College or University Teaching of Mathematics. Michael is the 6th recipient of the RMS Early Career Teaching Award. For additional information about these awards, and other news relevant to our Section, please visit the news page on the website. And, consider nominating a colleague for these awards. It's important for us to recognize and celebrate the great work that is happening across our Section!

And speaking of the website, thanks to Oscar Levin (UNC) for leading the development of our new website, based on an MAA-developed template. It looks great!

Next year's meeting is scheduled for April 21-22, in person at Black Hills State University. I hope you'll mark those dates and plan to join us. It will be great to be together again after two years of virtual meetings!

Gulden Karakok,
University of Northern Colorado
Chair, Rocky Mountain Section

The MAA Congress held a full-day, in-person meeting on August 3, 2022, during Mathfest in Philadelphia. Since most of us in the Congress had not actually met one another face-to-face before, we spent some time participating in various icebreakers as well as activities to help us to learn more about the way MAA Councils and Committees are formed and run. Included below is an overview of key information presented.

Presidential Update (Jenny Quinn, MAA President)

There is a new MAA Headquarters location—a beautiful space in Dupont Circle, not far from the previous Headquarters. Part of the motivation for the move includes financial benefit for MAA. MAA is in the process of transitioning its database/system management which should enable better support for section meeting registration. Another key highlight for sections is that there are multiple ways for us to access MAA supported speakers for our section meetings including the MAA Section Lecturer Series, the Editor Lectures Program, and the Section Visitors Program, thus enabling every section will have access to multiple speakers supported by MAA every year. The MAA will also continue to offer Virtual Webinars throughout the year.

Jenny noted that the MAA will be conducting many searches this year including one for a new Project NExT Director and one for the next *Math Horizons* editor. There is also a new journal called "Scatterplots" that will center around data science topics.

Overview of MAA Programs (Deirdre Smeltzer, Senior Director of Programs at MAA and Kiera Edwards, Director of Programs and Grants Management)

MAA would like to ensure that members know about its many programs. Here is a brief summary of the programs highlighted during our meeting.

Outreach Initiatives

· Grants available that support Outreach: Dolciani Math Enrichment; Tensor Women and Mathematics; Tensor SUMMA Grants

· NREUP: National Research Experience for Undergraduates Program (between sophomore and junior year): focused on supporting underrepresented groups

· Neff Outreach Initiative: prospecting to regions/programs that have not had funding

Virtual Programming

· In 2021: there were 21 MAA Virtual Programming events with 38 sessions (a total of 800 registrants)
    o MAA members can attend three of these for free

· Five virtual Distinguished Lectures so far in 2022 with three more scheduled

· Flipped Sessions for Section Meetings

· OPEN Math: Online Professional Enhancement and Capacity Building for Instructional Practices in Undergraduate Mathematics
    o 8 dynamic online PD workshops in Summer 2022
    o Proposals for next summer's workshops are due November 4, 2022
    o High quality faculty professional development

· Online Undergraduate Resource Fair for the Advancement and Alliance of Marginalize Mathematicians (OURFA2M2)
    o Two-day virtual conference, 11/5-6/22

Discussion of MAA Strategic Plan (Michael Pearson, MAA Executive Director)

There is a continued effort to expand and increase membership across new groups and to do a better job communication all that the MAA has to offer. MAA is modernizing business systems (financial system is already upgraded; management system is coming, including

section meeting registration support with a goal of $0 cost per registrant). MAA continues to focus on Programming, Meetings, and support of Sections. Finances are currently thriving.

General Information

· MathFest Meeting attendance in Philadelphia was 1380 including almost 100 online participants.

· The 2021 MAA Impact Report highlights "the many ways our community dedicated itself to expanding access across the field of mathematics."

If you have any questions or input that you would like me to share with the MAA, please don't hesitate to reach out:

Tracii Friedman
Colorado Mesa University
Representative, Rocky Mountain Section
tfriedma@coloradomesa.edu

Section News

Colorado School of Mines

NEW Faculty Members
The Mines' Applied Mathematics and Statistics department is happy to introduce and welcome our new colleagues.

Aram Bingham
Teaching Post Doc
PhD Tulane University

Aram Bingham joins Mines as a Teaching Post Doc this year. After earning his PhD in Mathematics from Tulane University, he was a postdoctoral researcher at the Centro de Ciencias Matematicas in Morelia, Mexico. His research interests are in combinatorics related to algebraic geometry and representation theory. He is excited to start gaining experience with flipped learning and alternative grading and is also working on developing a math outreach program for local prisons.

Daniel McKenzie
Assistant Professor
PhD University of Georgia

Daniel McKenzie is an applied mathematician, joining the AMS department at Mines in Fall 2022. He received his B.Sc from the University of Cape Town (South Africa), his PhD from the University of Georgia, and completed his postdoctoral work at the University of California, Los Angeles.
His research lies on the intersection of machine learning and signal processing. More specifically, he is interested in zeroth-order optimization, learning to optimize, and high-dimensional unsupervised learning. At Mines he is looking forward to applying his machine learning expertise in inter-disciplinary collaborations. Daniel enjoys teaching, particularly courses on data science and computational mathematics, and working with students. In fact, several of his favorite research papers have an undergraduate coauthor.

Brennan Sprinkle
Assistant Professor
PhD Northwestern University

Brennan Sprinkle started his career here at Mines, where he received both his BS and MS degrees in Applied Math and Computer Science (back when the programs were combined). He received his PhD in 2018 from Northwestern University under the supervision of Neelesh Patankar. Before starting at Mines he was a postdoc (Courant Instructor) at the Courant Institute of Mathematical Sciences working with Aleksandar Donev to design fast methods for simulating Brownian dynamics. Brennan's research interests broadly lie at the microscale, but he's also worked on simulating swimming fish and spinning garden sprinklers.

STUDENT AWARDS
We want to extend our congratulations to the winners of the following student awards from the spring semester.

Lauren "Zoe" Baker (Computational & Applied Mathematics) and **Ashley Gray (Statistics)** received the Outstanding Graduating Senior Award. Mines' AMS department presented Outstanding Graduating Senior Awards to two students in recognition of their academic excellence and their service to the department, university and community.

Kaleigh Rudge and Benjamin Kraciew received the Ryan Sayers Memorial Award. The Ryan Sayers Memorial Award recognizes the outstanding academic achievements of a graduating student, majoring in engineering physics and/or applied mathematics and statistics, who has performed significant undergraduate research.

Amadin Rabeendran received the Ryan Sayers Memorial Scholarship. The Ryan Sayers Memorial Award recognizes the outstanding academic achievements of a graduating student, majoring in engineering physics and/or applied mathematics and statistics, who has performed significant undergraduate research.

Julia Eiken received the E-days Engineer Award. This award is given to one senior from each department who truly exemplified what it means to be a committed student, an outstanding Oredigger, and a valuable member of the Mines community.

Haley Vinton received the AMS Honors Fund to Honor Excellence in Teaching and Learning Award. This award recognizes and honors Carol Job and Sharon McAuliffe, both of whom put a tremendous amount of effort into supporting students who struggled in their initial coursework

or student life at Mines and ultimately became successful students due to the effort and attention of caring faculty. Recipients of this award are recognized for their ability to persevere through personal and/or academic adversity and ultimately succeed at the Colorado School of Mines.

Griffin Hampton was the recipient of the Professor Everett Award in Mathematics. The Award is given to a senior who demonstrates scholarship, leadership, community service and potential for the innovative application of mathematics to mineral engineering.

Lauren "Zoe" Baker was the recipient of the Waltman Award. This award is presented to one graduate across the university who has shown the utmost integrity, scholarship and citizenship in their collegiate career.

Kaleigh Rudge, Haley Vinton, Alejandro Caballero, and Will Robinson received DI&A Student Appreciation Awards. These awards recognize their voluntary work and commitment to improve the climate on campus and beyond, by actively contributing to diversity, inclusion, and access efforts in the Department of Applied Mathematics and Statistics.

AMS Graduate Teaching Fellow **Matthew Hofkes** is the recipient of the Graduate Teaching Award that is given annually to the graduate student who has shown the greatest effectiveness as a teacher of undergraduate mathematics or statistics courses.

Matthew Picklo was the recipient of the Graduate Research Award that is presented annually to a graduate student for excellence in research prior to the completion of their PhD thesis, recognizing the research's original contribution to knowledge in the field and/or the student's exceptional collaboration with a research team.

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FACULTY AWARDS

The Mines' AMS department is proud of their award-winning faculty and staff:

Mike Mikucki, Teaching Associate Professor of Applied Mathematics and Statistics, was awarded the Early Career Teaching Award for the section. This award recognizes excellence in teaching in the mathematical sciences for faculty that are early in their career.


Karin Leiderman Gregg, (former) Associate Professor of Applied Mathematics and Statistics, received the Mines' Martin Luther King, Jr. Faculty Recognition award, honoring Mines faculty members who foster understanding and respect for diversity through their commitment to a philosophy of inclusion.

Jennifer Ryan, (former) Associate Professor of Applied Mathematics and Statistics was awarded a Mines DI&A Award. This award recognizes an exceptional understanding of diversity and inclusiveness as represented by efforts to contribute to DI&A at Mines beyond primary position description or role expectations on campus.

2022 MINES DI&A AWARD
SUPPORTING STUDENT SUCCESS
JENNIFER K. RYAN
Associate Professor, Applied Mathematics and Statistics
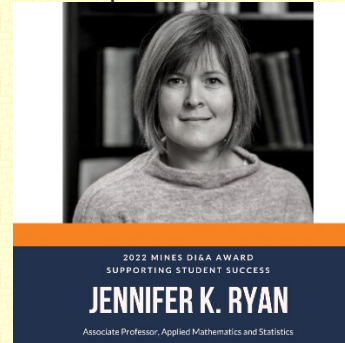
FACULTY GRANTS

The Applied Mathematics and Statistics Department is home to many successful research programs. We congratulate those faculty members who were awarded grants in 2021.

- Cecilia Diniz Behn (PI): CU - Anschutz Medical Center: Innovating Methods to Assess Tissue-Specific Insulin Sensitivity in Type 1 Diabetes ($11,000) - Project Start Date: 12/01/2021
- Soutir Bandyopadhyay (PI): High-Resolution Long-Term Weather Data for Energy ($268,146) - Project Start Date: 02/01/2022
- Eileen Martin (PI): NSF CAREER: Scalable Computational Seismology for All ($373,414) - Project Start Date: 05/01/2022

Rebecca Swanson,
Colorado School of Mines

Colorado State University - Pueblo

Our department said farewell to two of our faculty members this past summer.

After serving the department, college and university in a wide variety of ways for 3 decades, **Paul Chacon** has taken the plunge into retirement – the place won't be the same without him! We wish him only the best, in whatever he may choose to do in the future.

We also wish our mathematics education specialist **David Grollimund** well on his return to his native state of Michigan. We are grateful to **AnnMarie Cunningham**, a CSU Pueblo alumna with over 20 years of teaching, mentoring and educational leadership experience, for stepping in as the instructor of our methods course for preservice secondary teachers.

We were delighted that our search for a new department chair led to the return of another former student to our ranks – a very warm welcome back to **Stephen Aldrich**! After graduating with a mathematics major from CSU Pueblo in 1996, Stephen completed his Ph D in Homological Algebra in 2000. He has since taught a total of 22 years, first at Saint Mary's University of Minnesota and most recently at Adams State University in Alamosa.

We are also happy to have **Jim Louisell** back with us this fall after a year-long leave in AY 2021-22. **Darren Funk-Neuebauer** has followed his lead by taking a sabbatical leave this year.

Finally, we congratulate our colleague **Rick Kreminski** and his wife **Anne Casey**, who received the 2022 President's Award for Distinguished Service to the University for their unwavering support of CSU Pueblo since moving to the Pueblo community in 2009.

Janet Heine Barnett
janet.barnett@csupueblo.edu

South Dakota Mines

The South Dakota School of Mines and Technology had another successful year of recruitment and has managed to grow the numbers for the freshmen class over last year.

The Department of Mathematics is participating in a brand-new interdisciplinary PhD program that is starting this fall: Data Science and Engineering. **Kyle Caudle** will play a major role in the new doctorate program along with **Karen Braman** and **Roger Johnson**.

Kyle Caudle was also promoted to the position of Professor over the summer. **Donna Kliche**, who joined us from the Atmospheric Sciences Department, is planning to retire in December and we wish her well in retirement.

Last May, we had a surge of interest in our 70th annual West River Math Contest that attracted over 430 middle and high school students from the region to our campus.

This fall, our new Slide Rule math help center has moved to the recently remodeled space in the library, and we are eager to put the new space to use.

Kyle Riley
South Dakota School of Mines

Montana State University

The Department of Mathematical Sciences at Montana State University is pleased to introduce two new assistant professors of statistics, Dr. John Smith and Dr. Ian Laga.

Dr. Ian Laga is primarily interested in Bayesian modeling and generalized linear models, and specifically applications related to HIV and hard-to-reach, or key, populations like sex workers and drug users. These populations have increased risk of HIV and other infectious diseases, and governments and organizations like UNAIDS need accurate population size estimates for these key populations to implement prevention and treatment services. The statistical methods used to estimate population sizes are quite diverse, so his research involves small area estimation and geospatial methods, with a current emphasis on the Network Scale-up Method. He is currently involved in collaborative research projects to improve the Network Scale-up Method and estimate the size of various key populations across large areas, like sub-Saharan Africa. He is also broadly interested in anything related to Bayesian computing.

Dr. John Smith

Dr. Smith's research is focused largely on Bayesian application driven methodology, with a particular interest in modeling, forecasting, and simulation of complex dynamical systems in ecology. Current collaborative research projects in that area include integrating data from the National Ecosystem Observatory Network (NEON) with process-based models for carbon budgets in a Bayesian state space framework, and fitting hierarchical thermal performance curves to estimate traits of common disease vectors (e.g. mosquitoes). Additional research interests include surrogate models for ecological applications, sports forecasting, and adoption of best practices for iterative near-term ecological forecast.

Elizabeth A. Burroughs
Montana State University

University of Northern Colorado

We have several changes in our department at UNC and we want to share a couple of highlights. The Department of Mathematical Sciences (formerly School of Mathematical Sciences) had a new leadership team. Dr. Jodie Novak is our new department chair and Dr. Katie Morrison is the associate chair. Our former director, Dr. Virgil Pierce currently works as data analyst at Greeley Water and Sewer, enjoying his new career path utilizing his deep mathematical knowledge to serve our Greeley Community and beyond.

Dr. Lindsay Reiten received her tenure and promoted to Associate Professor! Congratulations, Lindsay.

The UNC Math contest has a new director, **Angela Steele**. The first round of the contest will take place November 2nd-9th, 2022. The final round and the award ceremony will be on February 25th, 2023, at UNC campus. For more information, please reach out to Angela Steele or check out the website which will be updated soon.

The UNC's Math Circles program will re-start its activities this academic year. Dr. James Tanton will run our first session on November 5th Saturday morning at UNC. The Northern Colorado Math Circles website will have more

information about location, time and RSVP information by the end of September.

Gulden Karakok
UNC

Is news from your school missing?
Send your news to your department liaison now with a request to forward it to the Pam Peters, Newsletter Editor, for inclusion in the next issue. pam.peters@ppcc.edu

Mark Your Calendars!

Submissions to the SP23 Newsletter are due 14 January (in an attempt to get the Spring conference news out in time for attendees). Plan ahead!

Contact Pam Peters, pam.peters@ppcc.edu if questions.

The 2022 Rocky Mountain Section Meeting
April 21-22, 2023
Black Hills State University

The 2023 Rocky Mountain Section meeting will be held April 21–22, 2023 on the campus of Black Hills State University in Spearfish, South Dakota.
Plenary speakers include:

- **Edray Goins**, West Pomona College - MAA Section Visitor
- **Sarah Greenwald**, Appalachian State University - Pólya Lecturer
- **Bob Cohen**, Western Colorado University - 2022 Burton W. Jones Distinguished Teaching Award Recipient

We invite proposals for contributed paper sessions and panels. Please submit proposals by December 1st, 2022 to one of the Program Co-Chairs:
Daluss Siewert, Daluss.Siewert@bhsu.edu
Dan Swenson, Daniel.Swenson@bhsu.edu

Please check the meeting webpage for updates:
https://www.rockymountain.maa.org/events/spring-2023-section-meeting

RM MAA Awards

2022 Burton W. Jones Award for Distinguished College/University Teaching of Mathematics
Recipient: Dr. Bob Cohen from Western Colorado University.
Nominated by Dr. Jeremy Muskat

The Rocky Mountain Section acknowledges all the hard work Dr.Cohen puts into his teaching to foster curiosity and to generate excitement about mathematics. His colleagues and former students praise his ability to infuse a deep excitement and love of mathematics into a wide range of courses. Bob was recognized by his colleagues as the main reason for growth in the number of math majors and minors. He created an actuarial program, organized Section NExT sessions, involved in undergraduate research in mathematics, and so forth. A colleague from another department working with their students who had taken courses from Bob stated, "Bob not only connects with the students but he has been particularly effective at showing them how to apply math to their particular focus ." Thank you, Dr. Cohen for your work and thank you to Dr. Muskat for taking the time to prepare the nomination packet.

2022 Early Career Teaching Award for Excellence in Teaching in the Mathematical Sciences
Recipient: Dr. Michael Mikucki, Colorado School of Mines.
Nominated by Dr. Gregory Fasshauser.

Dr.Mikucki is recognized by the Rocky Mountain Section for his significant positive influence on his students and colleagues at Mines. He has worked on multiple course design projects in his 6.5 short years, including revising the first semester calculus course, followed by an examination of the effectiveness of these changes. In addition, he has coordinated classes, has done postdoctoral and faculty mentoring and co-founded a teaching seminar. The testimony from his peers, and his co-creation and co-leading of the departmental Professional Learning Community, speak to his interest in improving teaching throughout the department. One former student and mentee captures Dr. Mikucki's passion for teaching with these words: "Dr. Mikucki believed in me as a student and as a teacher. His excitement for teaching astounds and inspires me to teach others whenever I have the opportunity. His encouragement has helped me be confident to ask questions that go beyond the surface level of content in all of my classes, not just mathematics." Thank you, Dr. Mikucki for your work and thank you to Dr. Fasshauser for taking the time to prepare the nomination packet.

Call for Nominations

This is a big year in the section for elections, with three important leadership positions on the Executive Committee coming open. Please act today to help the Nominating Committee find the best leadership it can for the Rocky Mountain Section – with self-nomination permitted and encouraged, that leader may very well be you!

The three openings to be filled are:

· Section Representative to MAA Congress
This individual will serve a three-year term (beginning in July 2023) on the MAA Congress, the national body that serves as a conduit for communication between MAA's Board of Directors, its sections, and other constituencies. Partial travel support for attendance at annual in-person meetings of the Congress (held in conjunction with MathFest) is provided by both national and the section. (See page 2 of the [Section Procedures Handbook](#) for details.) The Section Representative to MAA Congress is also a voting member of the Section Executive Committee. Please note that nominations for this position are due this November 9!! National will then conduct the election electronically on our behalf early in the new year.

· Chairperson-Elect
This individual will serve one year as Chairperson-Elect (beginning April 2023), two years as Chairperson of the Section, and one year as Past Chairperson. In the first and fourth years, responsibilities of the position include chairing the section's two teaching awards committees and the section activity grant award committee. As Section Chairperson in the second and third years, this individual leads the Executive Committee and presides over all business meetings for the section. The Chairperson is also responsible with appointing members to the section's standing committees.

· Secretary\Treasurer
This individual will serve a three-year term (beginning in April 2023) on the Section Executive Committee, with responsibility for Section funds, preparation of financial and other reports for national, preparation and distribution of minutes for all Executive Committee and Business Meetings, and assisting other officers in the performance of their duties.

Voting for Chairperson-Elect and Secretary\Treasurer will be held electronically, following the Section Business Meeting at Black Hills State University (April 21-22).

Further details of the duties for all three positions are described on pages 1–4 of the [Section Procedures Handbook](#). Only members of the MAA are eligible to serve.

Remember, the Rocky Mountain Section needs your help! Please send your nominations (of yourself or someone else) to any member of the Nominating Committee now!
> Janet Heine Barnett (committee chair), janet.barnett@csupueblo.edu
> John Carter, jcarte11@msudenver.edu
> Michael Jacobson, michael.jacobson@ucdenver.edu

Seeking Volunteer for RM Section Newsletter Editor

Have you been reading the Newsletter and thinking "this is so interesting" or "I would have done this a little differently". Have you been wanting to be of service to the Section but haven't really found your niche. It's time for some fresh blood and a new perspective. If you are interested in taking over editing the RM MAA Section newsletter, send along a note to pam.peters@ppcc.edu. No previous experience necessary!

Call for Teaching Award Nominations

One of the major components of our mission for the section is to recognize outstanding contributions in teaching. We have two teaching awards: the Burton W. Jones Distinguished Teaching Award; and the Early Career Teaching Award.

Both awards currently involve a cash award along with a physical plaque, but the true reward is the recognition for the outstanding performance in teaching. I know we have a large population of section members that are deserving candidates for a teaching award. Moreover, earning a regional teaching award is a great way to draw the attention of: administrators, prospective students, current students, alumni, and other important stakeholders to your department.

You can find details on the application process on the website https://www.rockymountain.maa.org/awards .

There are two dates to keep in mind: **December 15** (you need to submit the nomination form); and **January 15** (the deadline for the full nomination packet).

I hope you can manage to fill out the nomination form and take the first step to getting a colleague the respected recognition they deserve! Please contact me if you have any questions.

Kyle Riley, Section Award Coordinator, Kyle.Riley@sdsmt.edu

19th Annual SIAM Front Range Student Conference – March 11
20th Annual Pikes Peak Regional Undergraduate Mathematics Conference (PPRUMC) – March 18

For two decades now, these two one-day events have served as occasions for students across the Rocky Mountain Section and neighboring states to present their work in a professional, supportive setting, become acquainted with other students from the region, and learn more about the mathematics profession, including graduate school and career opportunities. And the tradition lives on!

The 19th Annual SIAM Front Range Student Conference will be held in-person on Saturday March 11 the CU Denver - Auraria Campus, co-sponsored by the student SIAM chapters along the Front Range with CU Boulder's Anne Dougherty (anne.dougherty@colorado.edu) and CU Denver's Emily Speakman (emily.speakman@ucdenver.edu) as local contacts. This conference is open to both undergraduate and graduate students and will focus on student research projects and presentations in Applied Mathematics.

The **20th Annual Conference Pikes Peak Regional Undergraduate Mathematics Conference** (**PPRUMC**) will be held **in-person** on **Saturday March 18** at **University of Colorado Colorado Springs** (UCCS), organized by UCCS faculty member Greg Oman (goman@uccs.edu). The focus of this one-day conference is on talks by undergraduates, who are encouraged to present in any area of mathematics, mathematics education or the history of mathematics. Both research and expository topics are welcome.

Both conference programs also include a Keynote Address and a panel discussion related to graduate school and/or career opportunities mathematics. Faculty are welcome and encouraged to attend either event. To encourage broad participation, organizers of both conferences aim to offer these opportunities at

little or no cost to participants, in some cases even offering partial financial reimbursement for student travel expenses (pending available funding).

Again, the dates of the 2023 conferences are:
SIAM Front Range Student Conference – Saturday, March 11
PPRUMC Conference – Saturday, March 18

Please spread the word among your fellow faculty and students about both these great opportunities, especially those students who are currently working on a project that will be ready for presentation by early March! Further detail for both conferences will be announced as it becomes available.

p.s. If you have suggestions regarding potential financial contributors–or if you would like to personally make a donation in support of either conference–please contact
PPRUMC Steering Committee member: janet.barnett@csupueblo.edu; and/or
SIAM Front Range Student Conference organizer: anne.dougherty@colorado.edu.

Colorado Council of Teachers of Mathematics

The Colorado Council of Teachers of Mathematics (CCTM), as a professional organization that provides networking, advocacy, and support for teachers across the state of Colorado, prepared several online PD sessions for this academic year. Through its newly formatted newsletter, you can learn more about CCTM activities, upcoming events, hear teachers' voices, learn about practical practices, spotlight Colorado mathematics educators and teams, and more.

Most recently, CCTM established a new membership category for groups. Visit CCTM's new website and renew your membership, which is now separate from annual conference registration. There will be no 2022 annual conference however there are 4 online PD sessions already scheduled for September and October.

Consider submitting an article to the Colorado Mathematics Teacher Journal (CCTM's peer-reviewed, open access journal). It has been hosted by the University of Northern Colorado Libraries.

Gulden Karakok, UNC
Higher Education Representative
CCTM Board of Directors

Section NExT-RM

The 2021-2022 Section NExT cohort is meeting regularly over the year and will be planning sessions for the 2023 section meeting.

Questions? Contact the Section NExT-RM Coordinators Mandi Schaeffer Fry, MSU Denver (aschaef6@msudenver.edu) or Rebecca Swanson, Colorado School of Mines (swanson@mines.edu).

19th Annual Pikes Peak Regional Undergraduate Mathematics Conference Report

Submitted by Janet Heine Barnet on behalf of the PPRUMC Steering Committee. Prepared with the assistance of Cory Scott (Colorado College) & Ike Agbanusi (Colorado College)

The 19th PPRUMC was virtually hosted by Colorado College on Saturday, February 26, 2021.

Dr. Casey Fiesler, an assistant professor in the Department of Information Science at University of Colorado Boulder, opened Saturday's program with her Keynote Address Ethical Debt and Unintended Consequences in AI and Data Science. The remainder of this one-day conference featured 15 contributed talks presented by a total of 18 undergraduate mathematics students. (See list below.) The program also included a panel on careers and graduate school opportunities in mathematics.

This year's conference was again offered at no cost to participants, with the only expenses incurred being an honorarium provided to the keynote speaker (funded by the Colorado College's Department of Mathematics and Computer Science). The PPRUMC Steering Committee is also grateful to the local organizing committee Cory Scott (Colorado College) & Ike Agbanusi (Colorado College), and to all the faculty who contributed their time and expertise to preparing student presenters, recruiting student participants and moderating sessions.

Student presentations were:
· Adithya Bhaskara (Silver Creek High School, FRCC), Aiming to Prove a Special Case of Green's Theorem Using the Shoelace Lemma
· Olivia Bouthot (CC), Extension of McDougall's Circle Theorem
· Ryan Chen (USAFA), Reduced-Order Modeling in Plasma Dynamical Systems Using Sensitivity Analysis and Machine Learning Techniques
· Jake Cooley (USAFA), A Behavioral Approach to Repeated Bayesian Security Games
· Philippos Dimitroglou and Alex Kreider (USAFA), The Games of Sylver Coinage and Destroy the Graph
· Cooper Doe (CC), Modeling Gene Regulatory Motifs
· Noah Genovese (USAFA), Use of StarLink Satellites to Model Atmospheric Density in Low Earth Orbit
· Ethan Gharst (USAFA), Adversarial Risk Analysis In Security Cooperation
· Michael Johnson (Indiana University), Stick Index of n-component Brunnian Links
· Matthew Kiesel (USAFA), Energy Analysis in the Asia-Pacific Theater
· Tati Kong and Renata Russell (USAFA), A self-indulgent talk about narcissistic numbers
· Daniel Lewinsohn (CC/ Oregon Health and Science University), Computational methods for single-cell RNA sequencing analysis
· Emelia McLaughlin and Julie Trimber (USAFA), The Problem of Fröbenius for Fulcrum Numerical Semigroups
· Emerson Worrell (CC), Analyses of Tapatan and Picaria
· Faith White, A numeric approach to the sport of bowling

Budget Information

There were no expenses for the 2021 PPRUMC. Fund raising efforts for the conference were also suspended due to the global pandemic.

As of August 1, 2022 the total PPRUMC funds on deposit with MAA-RMS thus remains at $3349.26.

More History-based Classroom Resources Available from TRIUMPHS

It appears to me that if one wishes to make progress in mathematics, one should study the masters and not the pupils.

> Niels Abel (1802 – 1829), as quoted in "Niels Abel, Mathematician Extraordinary" [Ore, 1957].

Now in its 8th year, the TRansforming Instruction in Undergraduate Mathematics via Primary Historical Sources (TRIUMPHS) project is still going strong! Although current NSF funding for this initiative project really will wind down this coming year, we continue to expand our collection of Primary Source Projects (PSPs). Designed to teach core topics in today's undergraduate mathematics curriculum through engagement with primary sources, these high-quality curricular resources based on the history of mathematics are available at no-cost to instructors or their students.

To date, the TRIUMPHS collection includes over 80 PSPs on core topics taught in courses ranging across the entire undergraduate mathematics curriculum – and **nearly half of those have been written by members of the Rocky Mountain Section**! A **sampling of those titles**, to whet your appetites, is appended to the end of this article.

All TRIUMPHS projects, as well as another 30 PSPs that were written under two prior NSF grants, **are freely available for download** via links on the **TRIUMPHS website: https://blogs.ursinus.edu/triumphs/**

Individuals interested in writing their own project can also receive mentorship from the PI team and a stipend for authoring a PSP – but only while our NSF funding lasts!

For **more information** about TRIUMPHS and opportunities to join the authorship team, **contact janet.barnett@csupueblo.edu**.

Sampling of TRIUMPHS PSPs authored by members of the Rocky Mountain Section

- **"The French Connection: Borda, Condorcet and the Mathematics of Voting Theory"** by Janet Heine Barnett (CSU Pueblo), suitable for use in a Liberal Studies, General Education or high school course.

- **"Representing and Interpreting Data with Playfair"** and three shorter mini-PSPs designed for use in introductory statistics courses by Diana White (CU Denver) and graduate students River Bond, Joshua Eastes & Negar Janani.

- **"Generating Pythagorean Triples via Gnomons"** by Janet Heine Barnett (CSU Pueblo), available in two versions, including one suitable for use with preservice elementary teachers.

- **"A Look at Desargues' Theorem from Dual Perspectives"** by Carl Lienert (Fort Lewis), designed for use in courses on geometry.

- **"Bhāskara's Approximation and Mādhava's Infinite Series for Sine"** and three other mini-PSPs designed for use in first-year calculus courses by Kenneth M Monks (FRCC – Boulder Campus), plus a series of three "Gaussian Guesswork" mini-PSPs designed for second-semester calculus by Janet Heine Barnett (CSU Pueblo).

- "**Braess' Paradox in City Planning: An Application of Multivariable Optimization**" and one other PSP designed for use in a multivariable calculus course by Kenneth M Monks (FRCC – Boulder Campus).

- "**Fourier's Heat Equation and the Birth of Modern Climate Science**" by Kenneth M Monks (FRCC – Boulder Campus), available in two versions suitable for use in multivariable calculus and differential equation courses.

- "**Roots of Early Group Theory in the Works of Lagrange**" and two other PSPs by Janet Heine Barnett (CSU Pueblo) designed for use in an abstract algebra course.

- "**The Möbius Function and Möbius Inversion**" by Carl Lienert (Fort Lewis) and "**Gaussian Integers and Dedekind's Creation of an Ideal: A Number Theory Project**," by Janet Heine Barnett (CSU Pueblo), both designed for use in a number theory course.

- "**Bolzano's on Continuity and the Intermediate Value Theorem**" and six additional PSPs by Dave Ruch (MSU Denver) designed for use in an introductory analysis course.

- "**Gauss and Cauchy on Complex Integration**" and two additional PSPs by Dave Ruch designed for use in a complex variables course.

-

Convergence: Where Mathematics, History, and Teaching Meet

Interested in enriching your own teaching and your students' learning of mathematics by bringing a historical perspective into your classroom, but not sure where to start? Take a look at *Convergence*!

The MAA's peer-reviewed, open-access online journal about the history of mathematics and its use in teaching, *Convergence* offers materials for integrating the history of mathematics into your teaching, from quick facts and attractive illustrations to fully-developed lesson plans and interactive features unavailable in print publications.

Our **new Classroom Resource Index** also makes it easier than ever access to classroom-ready resources, teaching suggestions, and informative background articles organized by course and educational level.
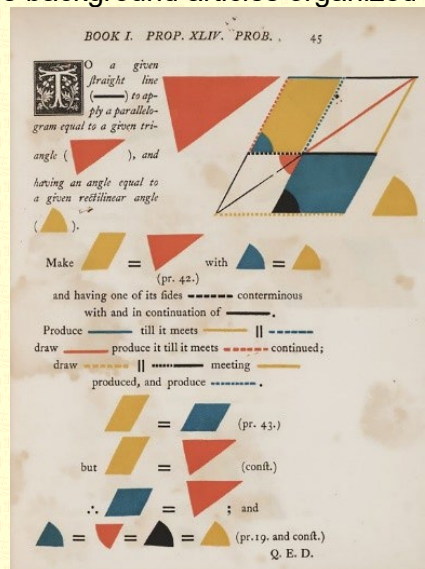
A Mathematical Treasure: Oliver Byrne, *The Elements of Euclid* (London, 1847). Courtesy of Columbia University.

Other helpful features you'll find in *Convergence* include
- On This Day: Three or four historic mathematical events that happened on each date. There is also a Quotation for the Day.
- Problems from another time: Mathematics problems from throughout mathematics history, as well as articles that include problem sets for students.
- Mathematical Treasures and a Portrait Gallery with thousands of images ready for classroom use.
- A calendar of meetings and events involving the History of Mathematics.
- An index of MAA award-winning articles on the history of mathematics.
-

Convergence **also serves as a unique vehicle for fostering your continued growth as a teacher-scholar by offering a highly visible peer-reviewed venue for publishing you own classroom ventures of a historical nature**.

Here are a few ways to make your own contribution:
- Use a teaching historically-based teaching resources such as one of our student projects in your classroom and tell us about your experiences.
- Develop a historically-informed teaching tool or module for the classroom and share them with us.
- Write an article or a commentary on a translation of your favorite primary source.
- Contribute an image from your own book collection or that at your library to our ever-expanding collection of Mathematical Treasures.
- Become a *Convergence* referee.

Visit our Guidelines for Authors to learn more about contributing or refereeing for *Convergence*. Questions or ideas for a contribution of your own? You can reach out to *Convergence* editors Amy Ackerberg-Hastings and Janet Heine Barnett at convergence@maa.org, or contact RMS member janet.barnett@csupueblo.edu directly.
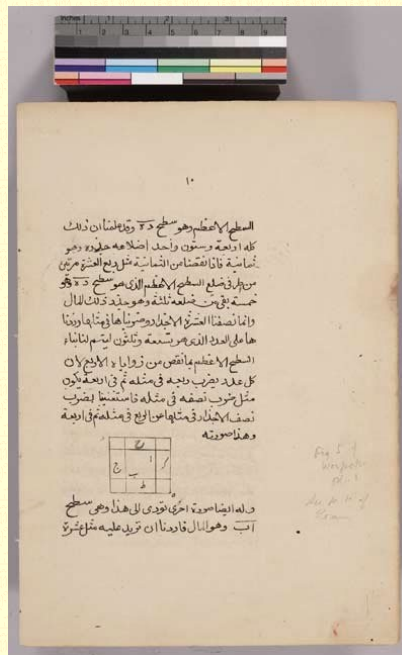
A page from al-Khwārizmī's 825 algebra text *Kitāb al-jabr wa'l-muqābala* (from which we get the word "algebra") in which he solves a quadratic of the form $x^2+bx=c$ by completing the square.

Meetings Calendar

AMATYC Annual Conference, Toronto, Canada
    November 17-20, 2022
Joint Mathematics Meetings, Boston, MA,
    January 4–7, 2023
SIAM Front Range Student Conference, CU Denver – Auraria Campus
    March 11, 2023
PPRUMC Conference, UCCS
    March 18, 2023
ColoMATYC Annual Meeting, Red Rocks CC
    April 7, 2023
MAA Rocky Mountain Section Meeting, BHSU
    April 21-22, 2023

MAA MathFest; Tampa, FL;
    August 2-5, 2023
NCTM Annual Meeting, Washington DC
    October 25-28, 2023
AMATYC Annual Conference, Omaha, NE
    November 9-12, 2023
Joint Mathematics Meetings, San Francisco, CA,
    January 3–6, 2024
MAA Rocky Mountain Section Meeting, PPSC
    April 19-20, 2024 (tentative)

MAA MathFest; Indianapolis, IN,
    August 7-10, 2024
AMATYC Annual Conference, Atlanta, GA
    November 14-17, 2024
NCTM Annual Meeting, Chicago, IL
    September 25-18, 2024
Joint Mathematics Meetings, Seattle, WA
    January 8-11, 2025

MAA Rocky Mountain Section
Guidance for Speakers

The Rocky Mountain Section would like to offer the following suggestions regarding preparation of a talk at the conference.

Presentation Length
All contributed talks will be placed in 20-minute time slots, ideally, approximately 15 minutes for the presentation with a few minutes at the end available for questions. Please prepare your presentation to fit the time allotted.

A moderator will be assigned to facilitate each session of presentations. The moderator will introduce the speaker, act as "host" for the session, signal the end of the presentation, and ask for questions from the audience

You can present your talk using Power Point slides, PDF, or similar, which will greatly enhance the pace of a presentation

Presentation Tips
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.

Please make sure that the slide content is typed in a font big enough and with spacing adequate to be seen clearly. We recommend including only a small amount of text on each slide.

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.

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The Rocky Mountain Section of
The Mathematical Association of America
Burton W. Jones Award
for Distinguished College or University Teaching of Mathematics

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For information on the Burton W. Jones Award for Distinguished College or University Teaching of Mathematics, check out: https://www.rockymountain.maa.org/s/BWJones_nomination_form-2dge.docx

Nomination forms should reach Section Awards Coordinator, Kyle Riley, Kyle.Riley@sdsmt.edu, by December 15 of each year. Complete nomination materials should reach Awards Coordinator by January 15 of each year.

Please consult the Section webpage (http://www.rockymountain.maa.org) for complete guidelines.

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The Rocky Mountain Section of
The Mathematical Association of America
Early Career Teaching Award
for Excellence in Teaching in the Mathematical Sciences

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For information on the Early Career Teaching Award, check out:
https://www.rockymountain.maa.org/s/EarlyCareer_nomination_form-tz6b.docx

Nomination forms should reach Section Awards Coordinator, Kyle Riley, Kyle.Riley@sdsmt.edu, by December 15 of each year. Complete nomination materials should reach Awards Coordinator by January 15 of each year.

Please consult the Section webpage (http://www.rockymountain.maa.org) for complete guidelines.

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Early Career Teaching Award Guidelines

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Part of the core mission for the Rocky Mountain Section is to provide recognition for quality mathematics teaching. The Early Career Teaching Award was established to recognized excellence in teaching in the mathematical sciences for faculty that are early in their career.

Eligibility
Nominees must:
- Hold a doctorate or master's degree
- Be college or university teachers who have held a full-time faculty appointment in a college department of mathematical sciences in the Rocky Mountain Section for at least two, but not more than seven, years since receiving their degree. A nominee who has just started the eighth year of teaching at the time of the application is still eligible for the award. If a nominee has held their degree for more than seven years, then the nominator must indicate on the

nomination form the times that the nominee was not teaching. Common exceptions to the seven-year limit are maternity, paternity, family, or medical leaves. Sabbaticals and postdoctoral fellowships are exceptions only if they involved no teaching and the application does not include accomplishments made during these times.
- Hold membership in the Mathematical Association of America

Guidelines for nomination

Nominees for the award may be made by any member of the Rocky Mountain Section of the MAA. Nominees should:

- Be recognized as extraordinarily successful in their teaching
- Have effectiveness in teaching undergraduate mathematics that can be documented
- Have had influence in their teaching beyond their own classrooms
- Foster curiosity and generate excitement about mathematics

Nomination form is due **December 15**. Complete nomination packet is due **January 15.**

Nomination Packet

A complete nomination packet should consist of the following documentation as it is described below.

1. **Nomination Form *and One-Page Summary*** - Describe the unusual and personal and professional qualities of the nominee that contribute to his or her extraordinary teaching succes and attach to this completed nomination form.

2. **Narrative (Up to 2 pages)** - Describe the nominee's extraordinary success in teaching by providing a narrative of the nominee's background, experience, teaching style, special contributions, other teaching awards, and any additional evidence of the nominee's unusual achievement in teaching. Note especially effectiveness in teaching undergraduate mathematics and influence beyond the nominee's own classrooms. The narrative should not exceed two single-spaced pages.

3. **Additional Documentation (Up to 2 pages)** - Submit no more than two pages of further evidence to document the nominee's extraordinary teaching success. This documentation will vary greatly from institution to institution, but may include summaries of peer or student evaluations, comments on teaching, possible increases in numbers of majors in mathematics (with clear evidence of the nominee's substantial responsibility for them), possible student success in mathematics competitions (with clear evidence of the nominee's substantial responsibility for them), success in research in mathematics conducted by undergraduate students under the direction of the nominee, production of superior quality honors theses by undergraduate students under the direction of the nominee, development of curricular materials successfully used by colleagues, adoption of the nominee's teaching methods or techniques by experienced colleagues, service as a respected adviser for a student group, etc.

   Nominators should bear in mind that the selection committee for the award might view a nomination more positively if it is accompanied not just by carefully chosen testimonials from a few selected students and faculty, but also reports comments and criticism which is representative of the whole spectrum of opinion among students and faculty on the nominee's teaching.

4. **Letters of Recommendation (Each letter is one page. Maximum of 5 letters.)**
   - Two letters from the nominee's present or former students.
   - One letter from the nominee's colleagues (could be the department chair)
   - At most two additional letters from anyone qualified to comment on the nominee's extraordinary teaching success, including additional students and/or colleagues.

Voluntary Section Dues

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.

Contributions may also be made in support of the Pikes Peak Regional Undergraduate Mathematics Conference; simply choose "Other" on the coupon below and specify "PPRUMC" in the space provided.

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
_____	Teaching Award Fund (Burton W. Jones DTA and ECTA)
_____	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:
     Mona Mocanasu
     MAA Rocky Mountain Section Treasurer/Secretary
     Metropolitan State University of Denver
     Department of Mathematical and Computer Sciences
     Campus Box 38; PO Box 173362
     Denver, CO 80217

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.

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."