



# SPRING 2008 NEWSLETTER

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

**Spring 2008 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/spring2008news.pdf>

# Table of Contents

<b>Spring 2008 Newsletter in PDF Format for Printing</b> .....	1
<b>Table of Contents</b> .....	2
<b>2007 - 2008 Section Officers and Committee Members</b> .....	4
<b>2009 Distinguished Teaching Award Call for Nominations</b> .....	5
<b>Section Students Recognized for Mathematics Excellence</b> .....	5
<b>Attention Putnam Coordinators</b> .....	5
<b>Chair's Report</b> .....	5
<b>Governor's Report</b> .....	6
<b>Section Officer's Meeting Report</b> .....	7
<b>Section News</b> .....	7
<b>Metropolitan State College of Denver</b> .....	7
<b>University of Northern Colorado</b> .....	8
<b>University of Wyoming</b> .....	8
<b>Student Activities</b> .....	9
<b>5<sup>th</sup> Annual Pikes Peak Regional Undergraduate Mathematics Conference Colorado College Saturday, February 23, 2008</b> .....	9
<b>4th SIAM Front Range Applied Mathematics Student Conference at the University of Colorado at Denver Saturday, March 1, 2008</b> .....	10
<b>Mathematics Awareness Month April 2008</b> .....	10
<b>MAA's 6th Annual Mathematical Study tour - Peru, Land of the Incas JULY 7 - 19, 2008</b> .....	10
<b>Black Hills State University to Host 2008 Meeting</b> .....	11
<b>About Our Featured Speakers</b> .....	12
<b>Abstracts from Select Invited Addresses</b> .....	13
<b>Workshop: ALEKS</b> .....	13
<b>Second Call for Papers</b> .....	14
<b>Additional Meeting Information</b> .....	15
<b>Preliminary 2008 Meeting Schedule</b> .....	16
<b>Attention Math Students !!!</b> .....	17
<b>Speaker Response Form - Due March 15, 2008</b> .....	18
<b>MAA ROCKY MOUNTAIN SECTION REGISTRATION FORM</b> .....	19
<b>Meeting Accommodations</b> .....	20
<b>Driving Directions to BHSU and Parking Information</b> .....	21
<b>BHSU Campus Map</b> .....	22
<b>MAA Rocky Mountain Section Suggestions for Speakers</b> .....	23
<b>Grants Available</b> .....	24
<b>Section Activity Grants Available</b> .....	24
<b>Student Recognition Grants Available</b> .....	24
<b>Section Logo Shirts Available</b> .....	24
<b>About Our Logo</b> .....	25
<b>Meetings Calendar</b> .....	25
<b>Burton W. Jones Award Nomination Form</b> .....	26
<b>Voluntary Section Dues</b> .....	27

<b>MAA Rocky Mountain Section Voluntary Dues Contribution Form</b> .....	27
<b>MAA Rocky Mountain Section Mission Statement</b> .....	28

## 2007 - 2008 Section Officers and Committee Members

Section Website <http://www-math.cudenver.edu/~maa-rm>

<b>Chair</b>	Mike Brilleslyper USAFA Colorado Springs, CO 80840	mike.brilleslyper@usafa.edu 719-333-9514
<b>Chair Elect</b>	Position vacant for 2007-2008	
<b>Vice-Chair</b>	Sarah Stanley Western Wyoming Community College 2500 College Drive; PO Box 428-A653 Rock Springs, WY 82902	sstanley@wwcc.wy.edu 307-382-1755
<b>Past Chair</b>	Jeff Berg Arapahoe Community College 2500 West College Drive, Box 9002 Littleton, CO 80160-9002	jeff.berg@arapahoe.edu 303-797-5837
<b>Secretary/ Treasurer</b>	Hortensia Soto-Johnson University of Northern Colorado Greeley, CO 80639-0001	hortensia.soto@unco.edu 970-351-2425
<b>Governor</b>	Jane Arledge Mesa State College Grand Junction, CO 81501	arledge@mesastate.edu 970-248-1751
<b>Program Chair</b>	Daluss Siewert Black Hills State University Spearfish, SD 57799	DalussSiewert@bhsu.edu 605-642-6209

---

### Section Nominating Committee

Graeme Fairweather (Chair), Mines	gfairwea@mines.edu
Gudryn Doherty, CCD	gudryn.doherty@ccd.edu
Amelia Taylor, Colorado College	amelia.taylor@coloradocollege.edu

### Awards Selection Committee

Jeff Berg (Chair), ACC	jeff.berg@arapahoe.edu
Sarah Stanley, WWCC	sstanley@wwcc.wy.edu
Lynna Ipiña, University of Wyoming	lpiña@uwoyo.edu
Beth Schaubroeck	beth.schaubroeck@usafa.edu

### Section Book Sales Coordinator and Section Liaison Coordinator

Janet Heine Barnett, CSU - Pueblo	janet.barnett@colostate-pueblo.edu
-----------------------------------	------------------------------------

### Section Student Activity Coordinator

Carl Lienert, Fort Lewis College	lienert_c@fortlewis.edu
----------------------------------	-------------------------

### Higher Education Representative on CCTM Governing Board

Mark Rogers, Mesa State	mcrogers@mesastate.edu
-------------------------	------------------------

### Public Information Officer

Hortensia Soto-Johnson, UNC	hortensia.soto@unco.edu
-----------------------------	-------------------------

### Website Editor

Bill Briggs, UCD	wbriggs@math.cudenver.edu
------------------	---------------------------

### Newsletter Editor

Linda Sundbye	sundbyel@mscd.edu
Metropolitan State College of Denver	303-556-8437
P. O. Box 173362, Campus Box 38	FAX: 303-556-5381
Denver, CO 80217-3362	

## 2009 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 life long 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 of in recognition of their efforts to support the section mission of promoting excellence in teaching; nominators and nominees both receive free meeting registration at the next section meeting. To begin the nomination process for an outstanding teacher that you know, simply submit the **one-page nomination form** (available at our website: <http://www-math.cudenver.edu/~maa-rm> and in this newsletter) by **1 December 2008**. **Complete nomination materials** (described on the website) are due **15 January 2009**.

## Section Students Recognized for Mathematics Excellence

Plans are under way for the 13th Colorado Mathematics Awards Ceremony and Reception to be held on Tuesday, May 13 at the Grant - Humphreys Mansion in Denver. At the school level we'll be recognizing the top ten participants on MATHCOUNTS, the AMC 8, 10, and 12 contests, and outstanding members of the Colorado American Regional Mathematics League team. At the collegiate level we'll be recognizing the top Putnam Exam team, the top three Putnam scorers, and the top team(s) on the Mathematical Contest in Modeling.

*Dick Gibbs, Fort Lewis College*

## Attention Putnam Coordinators

Putnam coordinators at the participating schools please send Dick Gibbs at [gibbs\\_d@fortlewis.edu](mailto: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

Chair's report: This has been an eye-opening year for me. I am on sabbatical from the Air Force Academy and I am spending my days working with engineers and scientists at Air Force Space Command, Peterson AFB. It is the first time I can remember that my life does not revolve around semesters. It appears that people really do work from 8 to 5; they do not refer to next Wednesday as "lesson 12;" they typically do not give pop quizzes; and, after New Year's they do not start the *countdown* to spring break. It is really quite enlightening to leave the ivory tower every now and then (or in my case the glass and aluminum tower). Perhaps the most startling revelation is that scientists and engineers really do use a lot of mathematics!

In addition to a welcome change of scenery, my sabbatical is affirming what most of us spend a great deal of effort doing: teaching students to think mathematically. I am involved in projects I knew nothing about, but my mathematical background has allowed me to quickly absorb ideas and contribute to the solution of the problem. When we spend time in our classes forcing students to deal with ill-posed problems or formulate their questions more precisely, we are doing exactly the right thing. Logical thinking and the ability to communicate abstract and complicated ideas is the cornerstone of success in any technical profession. I know how difficult and time-consuming it is to design assignments and courses that emphasize mathematical exploration and discovery, but the benefits to the students are worth the effort. I know that sometimes students resist our efforts in the classroom. They demand exam questions that "look like homework problems from the text;"

they balk at having to write about mathematics “this ain’t no English class,” and they seem to resist group projects “I can’t possibly work with *him!*” While it is certainly useful to know a variety of techniques and formulas, the ability to think logically, formulate and refine the right questions, and attack open-ended problems in a team environment is critical. I know the members of the RMS are on the front lines of this battle. Keep up the good work in your classes and please share your ideas with us at the spring section meeting.

Unfortunately, I was unable to attend the winter math meetings in San Diego. Our section secretary, **Hortensia Soto-Johnson**, attended the section officer’s meeting in my place. Her report appears in this newsletter. She notes that the MAA plans to hold a math jeopardy competition at Mathfest this summer. They have funds to support students from each section to attend. This is likely a wonderful opportunity for some of our students to display their talents and begin their involvement with the MAA. Maybe you have a student that would be a perfect fit for the RMS jeopardy team. Please think about ways in which the section could select a team. You can bring your ideas to the business meeting or send an email.

I hope that many of you had a chance to attend the national meeting. Undoubtedly, the RMS was well represented among the speakers, session chairs, and committee meetings. Though I am sure the conference was terrific, Sea World can hardly compare to the majesty of Mt. Rushmore, which you can see for yourself by attending the spring Rocky Mountain Section meeting. In fact, the spring meeting at Black Hills State University promises to be a great experience. Program Chair, **Daluss Siewert**, has put together a dynamic program that has something for everyone. We are truly honored to have MAA President, Professor **Joe Gallian**, as a keynote speaker. Professor Gallian is a gifted and motivational speaker. I still fondly remember the speech he gave to my group of Project NExT Fellows way back in 1995. I suspect we have some members that think “way back” and “95” don’t belong in the same sentence, but we won’t name any names.

Speaking of Project NExT, I am privileged to be a consultant to this year’s “sun dots.” Project NExT is truly one of the premier programs of the MAA. It continues to thrive and help new mathematics professors find their way in our

profession. I am pleased that we have four new NExT Fellows in the section and I hope to see all of them in Spearfish this April. I also encourage our regular attendees to bring some colleagues that either do not attend or have been absent for awhile.

Other highlights of the meeting will be the announcement of the section teaching award and recognition of long-standing MAA members. You can read more about the spring meeting in this newsletter. Please register early to give the program committee as much lead time as possible.

This spring we will elect a new Governor and secretary. I would like to thank **Jane Arledge** for all her hard work during her tenure as our section Governor. She has faithfully represented the RMS to the national MAA for the past three years. I encourage all section members to vote for our new section Governor as well. The two candidates on the ballot are both outstanding choices. I also need to thank Hortensia Soto-Johnson for her work as secretary. I repeatedly email her all sorts of dumb questions and she never fails to set me straight. She also never tells me my questions are dumb--now that’s a real math teacher! Tensia has taken care of all sorts of section business the past three years and has done an outstanding job. She is very involved in the MAA and I’m sure that will continue in the future.

In closing, I would like to reiterate my request from the fall newsletter: please let me know how the section or the MAA can better serve your needs. The MAA exists to serve its members. The national office is currently focused on how it can better assist the sections. If you have ideas, suggestions or concerns, then please let me or a member of the executive committee know about it.

I look forward to seeing all of you in South Dakota this spring.

Respectfully submitted,  
**Michael A. Brilleslyper, USAFA**  
**Chair, Rocky Mountain Section**

## **Governor’s Report**

The Board of Governors met in San Diego all day Saturday, January 5, 2008, which was the day before the AMS/MAA Joint Meeting. I will share with you some of the highlights.

## Section Officer's Meeting Report

- There will be some student travel support to attend the AMS/MAA Joint Mathematical Meetings and MathFest, funded by a new 5 year grant, beginning in August, 2008. Information for travel funds to for MathFest 2008 can be found at

<http://www.maa.org/news/travelgrantflyer.pdf>

- The MAA is embarking on a massive restructuring of the Councils and Committees as part of strategic planning, headed by **Carl Cowen** on the Working Group on Governance.
- The National Research Experience for Undergraduates Program received an NSF grant for June 2006 through May 2009. More information and the solicitation for 2008 can be found at <http://www.maa.org/nreup> ; applications are due in late February.
- There is a new link on the MAA website, called "Found Math." Members are invited to submit math-related images for posting; the photos change weekly. So please enjoy the photos of mathematics found by your colleagues, and contribute your treasures!
- Be looking for the upcoming *MAA Guides*, written by experts who provide overviews of a variety of mathematical topics. Each guide includes key definitions, theorems, and references. They will probably be especially helpful for graduate students studying for qualifying exams! The first four are under development and are *Algebra*, by Jerry Alexanderson, *Complex Analysis*, by Steve Krantz, *Number Theory*, by Woody Dudley, and *Real Analysis*, by Jerry Folland.
- The MAA is trying very hard to get all Sections to buy a brick at the Carriage House; we are slackers, so far. Bricks may be bought by individuals as well. If you are interested in donating to a good cause, see

<http://www.maa.org/development/riverofbricks.html> for more information.

This is my last *Governor's Report*, my term ends in June. I wish to thank you for electing me to be your Governor three years ago. It was a great experience. I look forward to reading reports that will be written by our new Governor!

Respectfully submitted,

**Jane Arledge, Governor,  
Rocky Mountain Section**

**Nancy Hagelgans**, the chair of the Committee on Sections, is attempting to make the Section Officers Meeting more interactive and similar to a working meeting. In an attempt to accomplish this goal, Nancy provided us with questions to reflect on and to discuss at MathFest. The questions are:

1. What are the 5 things the Association should expect from your Section?
2. What are the 5 things your Section expects from the Association?
3. How do you provide leadership transition and continuity of the Section's knowledge base?
4. How can the Association help your Section make effective leadership transitions?

Please think about these questions and e-mail any ideas to [hortensia.soto@unco.edu](mailto:hortensia.soto@unco.edu) or [Mike.Brilleslyper@usafa.edu](mailto:Mike.Brilleslyper@usafa.edu). We will discuss these questions at the business meeting.

MAA National Headquarters hopes to have a national jeopardy competition at MathFest and at the Joint Meeting. They are seeking teams from each section – I hope we will be able to get this done. Please bring ideas to the business meeting so that we can determine how to best identify the MAA Rocky Mountain Jeopardy Team. The MAA has received a large grant to help fund students who attend the MathFest and/or Joint Meeting. This will help fund a jeopardy team and other undergraduate or graduate students who present at the meeting.

**Hortensia Soto-Johnson,  
Secretary, Rocky Mountain Section**  
(sitting in for Mike Brilleslyper)

## Section News

### **Metropolitan State College of Denver**

**Larry Johnson**, founder, in the early 1990's, and Director for the Colorado Alliance for Minority Participation (CO-AMP) was awarded the campus Martin Luther King, Jr. Peace Award in January 2008 for his tireless efforts to improve the graduation rates for ethnic minorities in science, technology, engineering and math. Larry has also recently been appointed interim

co-director of the Office of Sponsored Programs. The CO-AMP program provides summer programs and outreach to middle and high school ethnic minority students, supports students with retention efforts in college, and more recently, provides assistance in applying for graduate programs.

Associate Chair of Mathematics **David Ruch** has received \$76,700 of a nearly \$384,000 grant from the National Science Foundation (NSF) for the second phase of a collaborative research project to ultimately add a course on wavelets to the math curriculum at colleges around the country.

At 30 years old, wavelets are a relatively new topic in the field of mathematics. They are used by the FBI for storing, compressing and uncompressing digital images of fingerprints.

David's colleague **Patrick Van Fleet**, professor and director of the Center for Applied Mathematics at the University of St. Thomas in Minnesota, originally began working on the wavelets project in 2002. The goal of phase I was to develop, then pilot, an undergraduate course at UST on wavelets, with a text, software and related materials. David has twice taught courses at Metro State piloting some of Van Fleet's materials.

The just-funded second phase will focus on refining, expanding and testing the wavelet course; institutionalizing it into the curriculum at four "home" schools (Metro State, St. Thomas, State University of New York- Genesco and the University of South Florida); developing project modules to be used by students as end-of-term projects and/or in undergraduate research; and grow a self-sustaining network of faculty educators.

David and Patrick ran an MAA mini-course at the Joint Math Meetings in January in San Diego, CA, and will be offering a PREP Workshop through the MAA June 4-7, 2008 at the University of St. Thomas in St. Paul, MN.

The NSF grant for the project comes through the Course, Curriculum and Laboratory Improvement (CCLI) program.

### **University of Northern Colorado**

The 16<sup>th</sup> Annual UNC Math Contest for students in grades 7-12 had over 1800 participants. The first round was delivered on-line this year in November and provided students throughout the state the opportunity to participate. The top 270 students were invited to

campus for the final round on February 2, 2008. The top 25 winners will be honored, along with their parents, at a banquet on April 6, 2008 that is hosted by the director of the Math Contest, **Richard Grassl**.

**Tensia Soto-Johnson, Cathleen Craviotto, and Ricardo Diaz** are organizing Las Chicas de Matematicas, a Summer Math Camp for young women. The one-week residential camp will introduce mathematically talented low-income high school girls to the topics of applied analysis and number theory through problem-solving and collaborative learning. The camp will be on the UNC campus from June 15 to June 20. For more information, contact

[Hortensia.soto@unco.edu](mailto:Hortensia.soto@unco.edu).

**Nathaniel Miller** received a two year \$32,000 grant from the Educational Advancement Foundation to intensively mentor two graduate students in teaching undergraduate geometry courses using inquiry based methods. **Nathan Wakefield** was selected as the first mentoree; he acted as a TA in two of Dr. Miller's geometry classes in the fall, and is now teaching his own class this spring, which Dr. Miller is observing. Another graduate student will be selected to do the same thing next year.

We are pleased to announce that **Rob Powers** won the Excellence Award in Teaching and **Richard Grassl** won the Academic Leadership Award in the College of Natural and Health Sciences.

Our Introduction to Computer Science course has been using Scribbler robots programmed in Python to motivate students and inspire interesting projects. The robots were purchased through a generous grant by an alumnus of the computer science program.

### **University of Wyoming**

Our newest faculty member arrived in December from a warmer climate. **Felipe Pereira** is an internationally known expert in modeling underground flows, and will be affiliated with UW's new School of Energy Resources. Felipe comes to us from the State University of Rio de Janeiro, Brazil, where he was a professor of computational and applied mathematics.

This summer's Rocky Mountain Mathematics Consortium Summer School at UW is on Parallel Numerical Methods for Partial Differential Equations. The RMMC summer school gives



graduate students and faculty a chance to learn about a new area mathematics, in a two-week workshop setting. Money is available to help with expenses for both faculty and graduate students, and you can also get graduate course credit. The dates are June 6-20 2008; more information is available at

[http://www.uwyo.edu/rmmc\\_2008](http://www.uwyo.edu/rmmc_2008).

**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.

**Student Activities**

Students are invited to participate in the MAA Sectional meeting at Black Hills State University in South Dakota, April 25-26, 2008. There will be student sessions in which you can give a talk, as well as a student poster session. If you would like to give a talk, please submit your proposal as described in the general announcement for the meeting.

You may also present a poster, even if you're also giving a talk. Bring a poster relating to your independent study, senior seminar, modeling contest, etc. Anything with mathematical content will be appropriate. Prizes will be awarded in categories to be determined.

Ask a faculty member at your institution about the meeting and/or contact me at [lienert\\_c@fortlewis.edu](mailto:lienert_c@fortlewis.edu).

**Carl Lienert**

**Section Student Activity Coordinator**

**5<sup>th</sup> Annual Pikes Peak Regional Undergraduate Mathematics Conference  
Colorado College  
Saturday, February 23, 2008**

The fifth annual Pikes Peak Regional Undergraduate Mathematics Conference (PPRUMC) is scheduled to take place on **23 February 2008** at **Colorado College** in Colorado Springs.

PPRUMC is a one-day mathematics conference held each spring at one of several host institutions in the Pikes Peak region. The focus of the conference is to give undergraduate mathematics students the opportunity to present in a professional setting. This is also an occasion for students to become acquainted with other students, to become aware of opportunities for undergraduates in mathematics, to investigate the possibility of graduate school, and to learn more about career options in mathematics.

**Faculty, now is the time to start working with students on projects for presentation next February!!!** Presentation topics could include the results of classroom, independent study, REU or other research projects; both research and expository topics are welcome.

Student talks will be scheduled for 15 minutes, each in parallel sessions throughout the day. The conference will also feature a morning keynote address by a noted mathematician, and an afternoon panel discussion on career or graduate school options. The conference day lasts roughly from 9:00 - 4:30, and time will be scheduled for optional participation in an informal celebratory dinner. The steering committee expects that lunch will be provided for all participants and that travel stipends will be available for students traveling longer distances, pending renewed funding from the MAA Undergraduate Mathematics Conferences Program (NSF Grant DMS - 0241090).

Details on conference scheduling and registration will be available in the Rocky Mountain Section Spring Newsletter. The **steering committee also seeks faculty volunteers** at Rocky Mountain Section schools to assist us in locally disseminating conference information to students, and in encouraging other faculty to undertake supervision of student projects with students who are interested in presenting at the conference.

To volunteer as a local contact, or for more information about the conference, please contact **Jane McDougall** (email: [JMcdougall@ColoradoCollege.edu](mailto:JMcdougall@ColoradoCollege.edu)).

**4th SIAM Front Range Applied  
Mathematics Student Conference  
at the University of Colorado at  
Denver  
Saturday, March 1, 2008**

The SIAM Student Chapters of the University of Colorado campuses are organizing the 4th Front Range Applied Mathematics Student Conference on Saturday, March 1st, 2008 at the University of Colorado at Denver campus (downtown Denver on the Auraria campus).

The conference is open to BOTH undergraduate and graduate students and will focus on student research projects and presentations in Applied Mathematics. Faculty are also welcome to attend.

Abstract deadline is Monday Feb. 25th, and registration fee is \$5 (to help cover the cost of the plenary speaker). The keynote speaker is **Harry Swinney** of University of Texas. He will be speaking on nonlinear dynamics.

This will be a great opportunity for learning about current student research in the Front Range area and meeting fellow students.

Further information about this conference can be found at:

<http://amath.colorado.edu/siam/conference/>

*Lynn Benethum, UC-Denver*

**Mathematics Awareness Month  
April 2008**

The American Mathematical Society, the American Statistical Association, the Mathematical Association of America, and the Society for Industrial and Applied Mathematics announce that the theme for Mathematics Awareness Month 2008 is **Math and Voting**.

For more information, list of resources, and posters, visit

<http://www.mathaware.org/mam/08/>

**MAA's 6th Annual  
Mathematical Study tour -  
Peru, Land of the Incas  
JULY 7 - 19, 2008**

Explore Peru, its mathematics, cultural heritage and scenic wonders, with leadership by two Peru experts: Douglas Sharon, former director of the Hearst Museum of Anthropology at UC-Berkeley and Carrie Brezine, manager of the khipus database at Harvard.

The mathematics of Peru will be examined through exploring Inca khipus, early Spanish-American mathematical texts, Peruvian ethnomathematics in general (including an examination of astronomical alignments, and of patterns in architecture and textile design). As has been the case at the destinations of previous mathematics tours, we will also learn about present day mathematics and mathematics education in Peru.

Highlights of the trip include Cuzco (meaning "center of the world" in the Quecha language) and mystical Machu Picchu, heart of the Inca Empire and one of the archaeological wonders of the world. We will examine Inca khipus at museums on site and hear about the latest research regarding these enigmatic artifacts. We will also go flightseeing above the 2000-year-old figures of butterflies, hummingbirds, a monkey and a condor at the Nazca Lines. In addition, we will explore the step pyramids of Pachacamac and visit the Pisac archaeological site and the Ollantaitambo ruins. Our tour will include the fascinating museums of Lima, the site of some of the earliest mathematical publications in the western hemisphere. A boat tour to the Ballestas Islands will allow us to view thousands of seabirds, seals, and maybe a penguin.

Peru has been inhabited by people for at least 12,000 years. Its rich cultural heritage from Chavin to Moche, from Nazca to Inca, is revealed in their jewelry, pottery, weavings, architecture, and agricultural developments. The coastal lowlands have seen numerous cultures flourish and fade.

An optional pretrip tour of the fabulous Galapagos Islands has also been arranged from July 1 - 7, 2008, for an additional cost.

**Contact Information:**

Lisa Kolbe, [lkolbe@maa.org](mailto:lkolbe@maa.org)

## Black Hills State University to Host 2008 Meeting

The Department of Mathematics at Black Hills State University is pleased to announce the results of its planning for the 2008 Spring Section Meeting, to be held at Black Hills State University on April 25-26. The program committee has put together a well-rounded program with something for nearly everyone, but the topics of *innovations in teaching* and *K-12 outreach* are emerging as the dual themes.

The innovations in teaching theme will be launched by a pre-conference workshop on Friday morning on ALEKS. ALEKS is a web-based, artificially intelligent assessment and learning system. This hands-on workshop, conducted by **Dr. Gary Hagerty** of Black Hills State University, will discuss what ALEKS is, how it works, and how it has been used in the college algebra courses at BSHU. Current and prospective teachers of remedial mathematics through precalculus level courses are encouraged to participate. Registration is limited to 15 participants; the registration fee is \$5 per person.

In keeping with tradition, the meeting will officially open with a special address by our most recent Burton W. Jones Distinguished Teaching Award Recipient, **Dr. Lynne Ipiña** of the University of Wyoming. Dr. Ipiña is an innovative teacher who is involved with improving education at many levels, both inside and outside the university. In particular, she has played a major role in the NSF funded Middle-Level Math Initiative and she plans to speak about her work with middle level in-service teachers.

This year's Invited Keynote Speaker will be **Dr. Joseph Gallian** of the University of Minnesota Duluth and current president of the MAA. Dr. Gallian is an inspiring speaker, a highly respected author, and an innovative educator who has received numerous prestigious awards and honors for his work. Dr. Gallian's banquet address and Saturday morning lecture on *Using Groups and Graphs to Create Symmetry Patterns* is sure to make the drive to Spearfish worthwhile.

An invited address on Friday afternoon by **Dr. Ben Sayler**, Director of the South Dakota Center for the Advancement of Mathematics and Science Education (CAMSE) at Black Hills State University, will focus on university-school district partnerships in improving K-12 education. Dr. Sayler is the principal investigator on Project PRIME, an NSF funded project focusing on improving K-12 mathematics in the Rapid City school district.

A special feature at this year's meeting will be a panel discussion on the *Placement Process* organized by **Dr. Stan Smith** of Black Hills State University. During this discussion, panelists will share how their institution places students into the mathematics curriculum and will discuss the pros and cons of the process. Panelists will also be encouraged to address related issues, such as, placing dual enrolled students and credit for AP calculus courses. Please contact Stan Smith ([StanleySmith@bhsu.edu](mailto:StanleySmith@bhsu.edu)) if you would like to represent your institution as a panelist.

Another special feature will be an undergraduate student **poster contest**. Students are encouraged to bring a poster relating to their independent study, senior seminar, modeling contest, etc. There is not a specific theme for this year's contest – any poster with mathematical content will be appropriate. Prizes will be awarded to the best entries in several different categories.

Rounding out the scientific program will be talks contributed by intelligent, involved and inspirational people like you! Information on special sessions and submission guidelines can be found in the Second Call for Papers and Speaker Response Form.

MAA books will again be on display at the meeting, with the opportunity to purchase books at a discount below membership prices! Not only does this save you money, but also the section receives a

10% “rebate” on all orders placed at the meeting. We also hope to have textbook publishers and other vendors available on-site.

The BHSU mathematics and mathematics education faculty are excited about this opportunity to host the section meeting this year. Most of you have never been to our beautiful campus nestled in the foothills of the northern Black Hills. We hope you and your students will come see what’s happening up north. We encourage attendees to visit some of the attractions, such as Spearfish Canyon, Mount Rushmore or Devil’s Tower, while in the area. Please contact the Program Chair, **Daluss Siewert**, at [dsiewert@bhsu.edu](mailto:dsiewert@bhsu.edu), or 605-642-6209 if you have any suggestions or questions concerning the program.

## About Our Featured Speakers

**Lynne Ipiña** received her B.S. in Mathematics from South Dakota State University in 1972. As an undergraduate, she received a Fulbright award to travel to Argentina, which awakened an interest in opportunities abroad. As a result she spent four years in Bolivia before returning to the United States to complete her M.A. and Ph.D in Mathematics from New York State University in 1978 and 1986, respectively. Dr. Ipiña is currently an associate professor at the University of Wyoming. At the University of Wyoming, she has had central involvement in two large NSF grants. One to deliver curriculum to enable in-service middle-school mathematics teachers in Wyoming to become highly proficient teachers, and another to prepare secondary mathematics teachers from around the United States to be leading mathematics educators in their districts. She is currently co-director of the Wyoming State Math Contest for high school students, she is active in both AMATYC and WCTM, and she provides a valuable bridge to the Wyoming community colleges. Dr. Ipiña has a passion for excellence in teaching and has had a significant impact on improving mathematics education at all levels.

**Ben Sayler** is a professor at Black Hills State University, and he’s in his ninth year as director of South Dakota’s Center for the Advancement of Mathematics and Science Education (CAMSE), a statewide “Center of Excellence.” He holds bachelor and master’s degrees from Yale University and a Ph.D. in Atmospheric Sciences from the University of Washington. Following his doctoral work, he completed an NSF-funded postdoctoral fellowship in math and science education. The bulk of his work has focused on partnerships between universities and K-12 schools. He currently serves as lead faculty or principal investigator on eight grant-funded initiatives designed to improve the teaching and learning of K-12 math and science.

**Joseph Gallian** received his undergraduate degree in mathematics from Slippery Rock University in 1966, a Master’s degree in Mathematics from the University of Kansas in 1968, and a Ph.D. in Mathematics from Notre Dame in 1971. Dr. Gallian is currently a professor at the University of Minnesota Duluth where he has been teaching since 1972. Dr. Gallian has received numerous prestigious awards and honors. These include teaching awards at both the state and national levels, awards for excellence in research with undergraduates, and exposition/scholarly awards. Dr. Gallian has been the author, co-author, or editor of seven books. He has written 100 journal articles and supervised 124 papers written by undergraduate students published in mainstream journals. Dr. Gallian has delivered numerous invited addresses, including 19 at national meetings and 47 at regional MAA meetings. Articles about his work have also appeared in the mainstream media, including twice in the Washington Post. Dr. Gallian has been actively involved in the MAA and the greater mathematical community. He is currently co-director of project NExT and has served as Associate Editor of the American Mathematical Monthly and Mathematics Magazine just to name a few. Currently, Dr. Gallian serves as the President of the Mathematical Association of America.

## **Abstracts from Select Invited Addresses**

### **Friday Banquet Address and Saturday Keynote Address *Using Groups and Graphs to Create Symmetry Patterns***

Dr. Joseph A. Gallian, University of Minnesota Duluth  
President of the Mathematical Association of America

In this two part talk, we will use video animations to explain how Hamiltonian paths, spanning trees, cosets in groups, and factor groups can be used to create computer generated symmetry patterns in hyperbolic and Euclidean planes. These methods were used to create the images for the 2003 Mathematics Awareness Month poster. The two talks will be on the same topic, but they are independent. The Friday banquet address will describe the theory and the Saturday morning talk will give the applications.

### **Friday Keynote Address**

#### ***Partnering to Improve K-12 Mathematics***

Dr. Ben Sayler, Black Hills State University  
Director for the South Dakota Center for the  
Advancement of Mathematics and Science Education

How are university faculty and K-12 leaders working together to strengthen mathematics education? This presentation will highlight examples of productive university-school district partnerships, characterizing both the benefits and challenges of such work. What is the nature of K-12 improvement efforts, in what ways can higher education be especially helpful, and what does higher education stand to gain? What are the implications for preparing future teachers and how can K-12 leaders lend support?

## **Workshop: ALEKS**

Dr. Gary Hagerty  
Black Hills State University

On Friday morning, Dr. Gary Hagerty of Black Hills State University will conduct a pre-conference workshop on *ALEKS*. *ALEKS* is a web-based, artificially intelligent assessment and learning system. This hands-on workshop will discuss what *ALEKS* is, how it works, and how it has been used in the college algebra courses at BSHU. Current and prospective teachers of remedial mathematics through precalculus level courses are encouraged to participate. Registration is limited to 15 participants; the registration fee is \$5 per person. The workshop will take place in the Governor's Electronic Classroom in the E. Y. Berry Library Learning Center from 9:30 – 11:15 am.

## **Second Call for Papers**

The **deadline** for submission of abstracts for the 2008 Spring Section Meeting is **March 15, 2008**. Proposals received from students and MAA members after this date will be scheduled on a first-come, first-scheduled, space-available basis. Proposals from non-members sponsored by MAA members must be received by the deadline.

Although talks on all topics mathematical are welcome, special sessions are being organized around the following themes:

### **History of Mathematics – Emphasis on American Mathematics**

Organized by Janet Barnett (CSU - Pueblo) and Don Teets (SDSM&T)

While all talks on the history of mathematics are welcome in this session, we would like to especially encourage talks pertaining to American mathematicians, the development of mathematics in America, the history of American mathematics organizations, etc.

### **Innovations in Teaching**

Organized by Gary Hagerty (BHSU)

In this session we invite talks on innovations in teaching mathematics related to the use of technology, such as, distance learning, modeling, using the internet for instruction and assessment of mathematics, etc.

### **The Interplay Between Geometry, Algebra, and Combinatorics**

Organized by Stan Payne and Bill Cherowitzo (UCDHSC)

In this session we invite talks on geometry, algebra, and combinatorics with emphasis on the connections between these areas. Talks should be addressed to general mathematics faculty.

### **Ideas and Applications in Ordinary Differential Equations**

Organized by Parthasarathi Nag (BHSU)

In this session, we invite talks on broad range of topics involving ordinary differential equations, such as, but not limited to, modeling physical phenomena, control theoretic analysis, describing phenomena related to bifurcation and chaos, numerical solutions of differential equations, and existence uniqueness results. Speakers should take into account that their talk will address an audience with a broad range of backgrounds and varied mathematical interests.

### **Partnering to Improve K-12 Mathematics**

Organized by Ben Saylor (BHSU), Michelle Chamberlin (UW), and Robert Powers (UNC)

In this session, we invite talks related to how university faculty and K-12 leaders are working to strengthen mathematics education. Topics in which university faculty and K-12 leaders are working together are welcome, including university-school district partnerships, changes in K-12 instruction, and teacher professional development projects. In addition, topics relevant to teacher education are welcome, including ideas, innovations, and investigations of programs of preparation in elementary mathematics, secondary mathematics, methods of teaching mathematics, and graduate mathematics education. This session is partially sponsored by the Rocky Mountain Association of Mathematics Teacher Educators (RMAMTE).

### **Research by Graduate Students**

Organized by Hortensia Soto-Johnson (UNC)

In this session, graduate students will present their research to faculty, other graduate students and undergraduates. Graduate students in pure mathematics, applied mathematics, and mathematics education are invited to participate. Presenters need not be near completion of his/her program.

### **Undergraduate Student Papers**

Organized by Carl Lienert (Fort Lewis College) and Kyle Riley (SDSM&T)

Are you supervising a student research project? Encourage your student to present their results at the meeting! Registration is free for all students, and student speakers receive a complimentary one-year membership in the MAA, including the journal of their choice.

The default talk length will be 20 minutes, with every effort made (within the constraints of the schedule) to accommodate requests for longer talks and other scheduling preferences. **Please submit special requests early.**

For non-electronic submissions, please use the Speaker Response Form located on the following page. **E-mail equivalents of this form are encouraged!** Please be sure to include all requested information if using e-mail.

## **Additional Meeting Information**

**Dr. Curtis Card**, Chair of the Mathematics Department at Black Hills State University, cordially invites **department chairs** and **MAA liaisons** to a luncheon and an open discussion on Friday, April 25, 11:30 – 12:30 in Pangburn Little Dining Room, BHSU campus. The cost is \$8 per person. Please indicate on your registration form if you are interested in attending the luncheon. Reservations must be received by April 17<sup>th</sup> to be guaranteed. A limited number may be available on-site.

The Program Committee cordially invites all participants to attend the **Friday Evening Reception** to be held at the **Spearfish Holiday Inn and Convention Center**, I-90, Exit 14. The Friday Evening Banquet and Awards Ceremony will follow the reception at the same location. Please note that banquet reservations must be received by April 17<sup>th</sup> to guarantee availability. A limited number may be available on-site.

A panel discussion on the **Placement Process** organized by **Dr. Stan Smith** of Black Hills State University is tentatively scheduled for Saturday morning. During this discussion, panelists will share how their institution places students into the mathematics curriculum and will discuss the pros and cons of the process. Panelists will also be encouraged to address related issues, such as, placing dual enrolled students and credit for AP calculus courses. Please contact Stan Smith at [StanleySmith@bhsu.edu](mailto:StanleySmith@bhsu.edu) if you would like to represent your institution as a panelist.

Please encourage your students to participate in the **undergraduate student poster contest**. Students are invited to bring a poster relating to their independent study, senior seminar, modeling contest, etc. This year's contest has no specific theme – any poster with mathematical content will be appropriate. Prizes will be awarded to the best entries in several different categories. Please contact **Dr. Carl Leinert**, Poster Contest Organizer, at [lienert\\_c@fortlewis.edu](mailto:lienert_c@fortlewis.edu) if you have any questions.

## Preliminary 2008 Meeting Schedule

### Friday, April 25

9:30 - 11:30 **Workshop: ALEKS\*** (Library Learning Center, Governor's Electronic Classroom)  
Dr. Gary Hagerty, BHSU

11:30 – 12:30 **Luncheon for Department Chairs and MAA Liaisons**

12:00 – 4:30 **Registration, Publisher Exhibits, and MAA Book Sales**

12:45 – 1:00 **Opening Remarks and Welcome** (Meier Recital Hall)

1:00 – 1:45 **Burton W. Jones Distinguished Teaching Award Invited Lecture**  
(Meier Recital Hall)  
Dr. Lynne Ipiña, University of Wyoming

1:55 – 2:10 **Commercial Presentation:** MyMathLab, MyStatLab, MathXL\* (Meier Hall, Room 128)  
Sarah Korbut, Pearson Education

2:15 – 4:25 **Parallel Sessions** – Contributed Papers, Special Sessions & Panels  
(Meier Hall, Rooms 128, 202, 204, 205, 206)

4:40 – 5:20 **Friday Keynote Address** (Meier Recital Hall)  
*Partnering to Improve K-12 Mathematics*  
Dr. Ben Sayler, BHSU, Center for the Advancement of Math & Science Education.

5:45 – 6:30 **Reception and Undergraduate Poster Contest**  
Spearfish Holiday Inn & Convention Center  
**Poster Contest Organizer:** Dr. Carl Leinert, Fort Lewis College

6:30 – 9:00 **Banquet and Awards Ceremony**  
**Banquet Address:** *Using Groups & Graphs to Create Symmetry Patterns (Part 1)*  
Dr. Joseph Gallian, University of Minnesota Duluth

### Saturday, April 26

8:00 – 8:50 **MAA Rocky Mountain Section Business Meeting** (Meier Hall, Room 128)  
Please forward agenda items to Hortensia Soto-Johnson at [hortensia.soto@unco.edu](mailto:hortensia.soto@unco.edu) by March 31.

9:00 – 9:45 **Saturday Keynote Address** (Meier Recital Hall)  
*Using Groups & Graphs to Create Symmetry Patterns (Part 2)*  
Dr. Joseph Gallian, University of Minnesota Duluth

10:00 – 1:00 **MAA Book Sales**

10:00 – 11:00 **Commercial Presentation:** Content on Demand online courses\* (Meier Hall, Room 128)  
Martin Lew, Key College Publishing

10:00 – 12:10 **Parallel Sessions** – Contributed Papers, Special Sessions & Panels  
(Meier Hall, Rooms 128, 202, 204, 205, 206)

\* The Rocky Mountain Section of the MAA and BHSU do not endorse any commercial products.

Watch for regular meeting updates at <http://www-math.cudenver.edu/~maa-rm>



## Attention Math Students !!!

### Mathematical Association of America



### Rocky Mountain Section 2008 Annual Meeting

April 25-26, 2008



### Black Hills State University Spearfish, South Dakota

## Program Highlights Include:

#### Research by Graduate Students and Undergraduate Student Paper Sessions

Interested in presenting the results of your research project at a professional conference? This is a great opportunity to share ideas and meet other math students! All student speakers receive a complimentary one-year MAA membership, including a subscription to a journal of your choice.

#### Reception and Undergraduate Poster Session

All students are invited to present a mathematical poster. This might be from a senior seminar, an independent study, a class, a summer research project, etc. If it has math, it's good. Feel free to contact Carl Lienert with any questions. Please make all posters on standard, folding 3' x 4' poster boards.

Poster Contest Organizer: Dr. Carl Lienert; e-mail [lienert\\_c@fortlewis.edu](mailto:lienert_c@fortlewis.edu)

#### Invited Keynote Speakers

Dr. Joseph A. Gallian, University of Minnesota Duluth  
President of the Mathematical Association of America

Dr. Lynne Ipiña, University of Wyoming  
Recipient of the 2007 Burton W. Jones Distinguished Teaching Award

Dr. Ben Sayler, Black Hills State University  
Director of the Center for the Advancement of Mathematics and Science Education

MEETING REGISTRATION FOR STUDENTS IS FREE!!

Friday evening banquet fees are \$24 per person.

#### To Register

Complete the [Registration Form](#) and return it to the indicated address.

If you are giving a talk in the student paper sessions, don't forget to submit your presentation abstract by March 15th. See the [Speaker Response Form](#) for more details.

Helpful Information: [Giving a Good Presentation](#) - student brochure.

#### Questions?

Talk with your math professors, or contact the Program Chair, Dr. Daluss Siewert, at [dsiewert@bhsu.edu](mailto:dsiewert@bhsu.edu).

For more details and highlights of the meeting, including local hotel information, registrations forms, etc., visit the Rocky Mountain Section web site at: <http://www-math.cudenver.edu/~maa-rm>.

## Speaker Response Form – Due March 15, 2008

### E-Mail submissions strongly preferred

Speaker Name \_\_\_\_\_

Affiliation \_\_\_\_\_

Mailing Address (Please include affiliation if needed for U.S. mail)

\_\_\_\_\_

Email Address \_\_\_\_\_ Phone Number \_\_\_\_\_

Faculty Sponsor<sup>1</sup> \_\_\_\_\_

MAA Member Sponsor<sup>2</sup> \_\_\_\_\_

Title: \_\_\_\_\_

Abstract (100 words or less):

Is this talk intended for any of the following special sessions?

- History of Mathematics – Emphasis on American Mathematics
- Innovations in Teaching
- The Interplay Between Geometry, Algebra, and Combinatorics
- Ideas and Applications in Ordinary Differential Equations
- Partnering to Improve K-12 Mathematics
- Graduate Student Research Session
- Undergraduate Student Paper Session

Special Equipment Needs: \_\_\_\_\_

Schedule Preference Request: \_\_\_\_\_

Special Talk Length Request: \_\_\_\_\_

### PLEASE E-MAIL RETURN THIS FORM OR AN E-MAIL EQUIVALENT TO:

Daluss Siewert, Program Chair  
Department of Mathematics  
Black Hills State University  
1200 University Street, Unit 9029  
Spearfish, SD 57799-9209  
[dsiewert@bhsu.edu](mailto:dsiewert@bhsu.edu)

<sup>1</sup> For student speakers only

<sup>2</sup> For non-MAA members/non-students only

# MAA ROCKY MOUNTAIN SECTION REGISTRATION FORM

April 25 - 26, 2008, Black Hills State University; Spearfish, SD

**MEETING REGISTRATION FORM** NOTE: For pre-registration discount, form must be received by April 6.

Last Name \_\_\_\_\_ First Name \_\_\_\_\_

Affiliation (for badge) \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

E-mail address: \_\_\_\_\_

Phone: \_\_\_\_\_ FAX: \_\_\_\_\_

### Please check all that apply:

Memberships:  MAA  AMS  AMATYC  NCTM  CCTM  Other: \_\_\_\_\_

Affiliation: Faculty member at a college or university with highest mathematics degree offered:

Associate  Bachelors  Masters  Doctorate

High school teacher  Post-doctoral Fellow  Business/Industry/Government

Undergraduate student  Graduate Student

### Fees:

\_\_\_\_\_ Student Registration and K-12 Teacher Meeting Registration (\$0)

\_\_\_\_\_ General Meeting Registration (\$20 before 4/17, \$30 after)

\_\_\_\_\_ Friday Morning Workshop: *ALEKS* (\$5 per person)

\_\_\_\_\_ Department Chair and MAA Liaison Friday Luncheon Tickets (\$8 per person)

Please indicate the number of luncheon tickets required \_\_\_\_\_

Reservations must be received by 4/17 to be guaranteed; a limited number may be available onsite.

\_\_\_\_\_ Friday Banquet (\$24 per person, spouses and friends welcome)

Please indicate the number of banquet tickets required \_\_\_\_\_

Reservations must be received by 4/17 to be guaranteed. A limited number may be available onsite.

Taste of Italy banquet buffet to feature Caesar salad or tomato salad with red onion and fresh mozzarella, Italian blend vegetables, penne pasta, red sauce with meatballs, chicken broccoli alfredo sauce, choice of meat or vegetable lasagna, and garlic breadsticks.

Program highlights to include an invited address by MAA President, Joe Gallian, presentation of 2008 Section Awards and door prizes.

\_\_\_\_\_ Voluntary Section Dues Contribution (\$10 suggested)

Voluntary section dues contributions are used to support special initiatives such as the Student Recognition and Section Activity Grant Programs. Contributors will receive a letter for their financial records.

\_\_\_\_\_ **Total Enclosed**

Please make checks\* payable to:

**MAA Rocky Mountain Section**

Return form with payment to:

**Daluss Siewert, Program Chair**

**Department of Mathematics**

**Black Hills State University**

**1200 University Street, Unit 9029**

**Spearfish, SD 57799-9209**

\* Please note that there will be a \$25.00 charge for returned checks.

## Meeting Accommodations

- Most hotels, including the **Spearfish Holiday Inn and Convention Center** – the site of the Friday evening banquet, are at I-90, Exit 14, approximately 3 miles from campus. The **Fairfield Inn, Quality Inn, and Comfort Suites** are located across the street from the Spearfish Holiday Inn and Convention Center. **Howard Johnson Express Inn, All American Inn, and Super 8 Motel** are also at I-90 Exit 14 and are about ½ mile or less from the Spearfish Holiday Inn and Convention Center.
- The **Best Western Black Hills Lodge** is at I-90, Exit 12, approximately 1 mile from campus.
- The **Days Inn** is located near downtown Spearfish, approximately 1 mile from campus. Take I-90, Exit 10 and go one-mile south.
- The **Travelodge Spearfish Inn** is approximately ½ mile from campus. Take I-90, Exit 10, and go approximately 1.5 miles south or take I-90, Exit 12, and go approximately 1 mile west. Hotel is not on the main road so watch for signs.
- To make a reservation, contact the hotel directly and request the **MAA Meeting rate**.
- Make your reservations early to ensure the lower rates are still available!
- State of South Dakota employees need to verify state rates when making reservations.

<b>Holiday Inn/Spearfish Convention Center</b> I-90, Exit 14, North Side Phone: 1-800-999-3541 or 605-642-4683 \$72.95 double, \$82.95 pool-side, before March 25 <i>Site of Friday evening banquet.</i>	<b>* Fairfield Inn by Marriott</b> I-90, Exit 14, North Side Phone: 605-642-3500 \$54.00 double, before April 21 <i>Includes Continental Breakfast.</i>
<b>* Quality Inn</b> I-90, Exit 14, North Side Phone: 605-642-2337 \$54.99 double, before April 1 <i>Includes Continental Breakfast.</i>	<b>* Comfort Suites</b> I-90, Exit 14, North Side Phone: 605-642-3003 \$89.99 double, before April 15 <i>Includes Continental Breakfast.</i>
<b>Howard Johnsons Express Inn</b> I-90, Exit 14, South Side Phone: 605-642-8105 \$54.95 double. <i>Includes Continental Breakfast.</i>	<b>All American Inn</b> 2257 E. Colorado Blvd (I-90, Exit 14) Phone: 605-642-2350 \$54.99 double. <i>Includes Continental Breakfast.</i>
<b>Super 8 Motel</b> 440 Heritage Drive. (I-90, Exit 14) Phone: 605-642-4721 \$49.99 double <i>Includes Continental Breakfast.</i>	<b>** Days Inn</b> 240 Ryan Road (I-90, Exit 10) Phone: 605-642-7101 \$53.00 double <i>Includes Continental Breakfast.</i>
<b>** Best Western Black Hills Lodge</b> 540 East Jackson (I-90, Exit 12) Phone: 605-642-7795 \$50.00 double <i>Includes Continental Breakfast.</i>	<b>** Travelodge Spearfish Inn</b> 346 W. Kansas St. (I-90, Exit 12) Phone: 1-800-843-6358 or 605-642-4676 \$49.00 - \$59.00 (standard rates) <i>Includes Continental Breakfast.</i>

\* Denotes hotels closest to the site of the Friday evening banquet.

\*\* Denotes hotels closest to the BHSU campus and downtown Spearfish.

## **Driving Directions to BHSU and Parking Information**

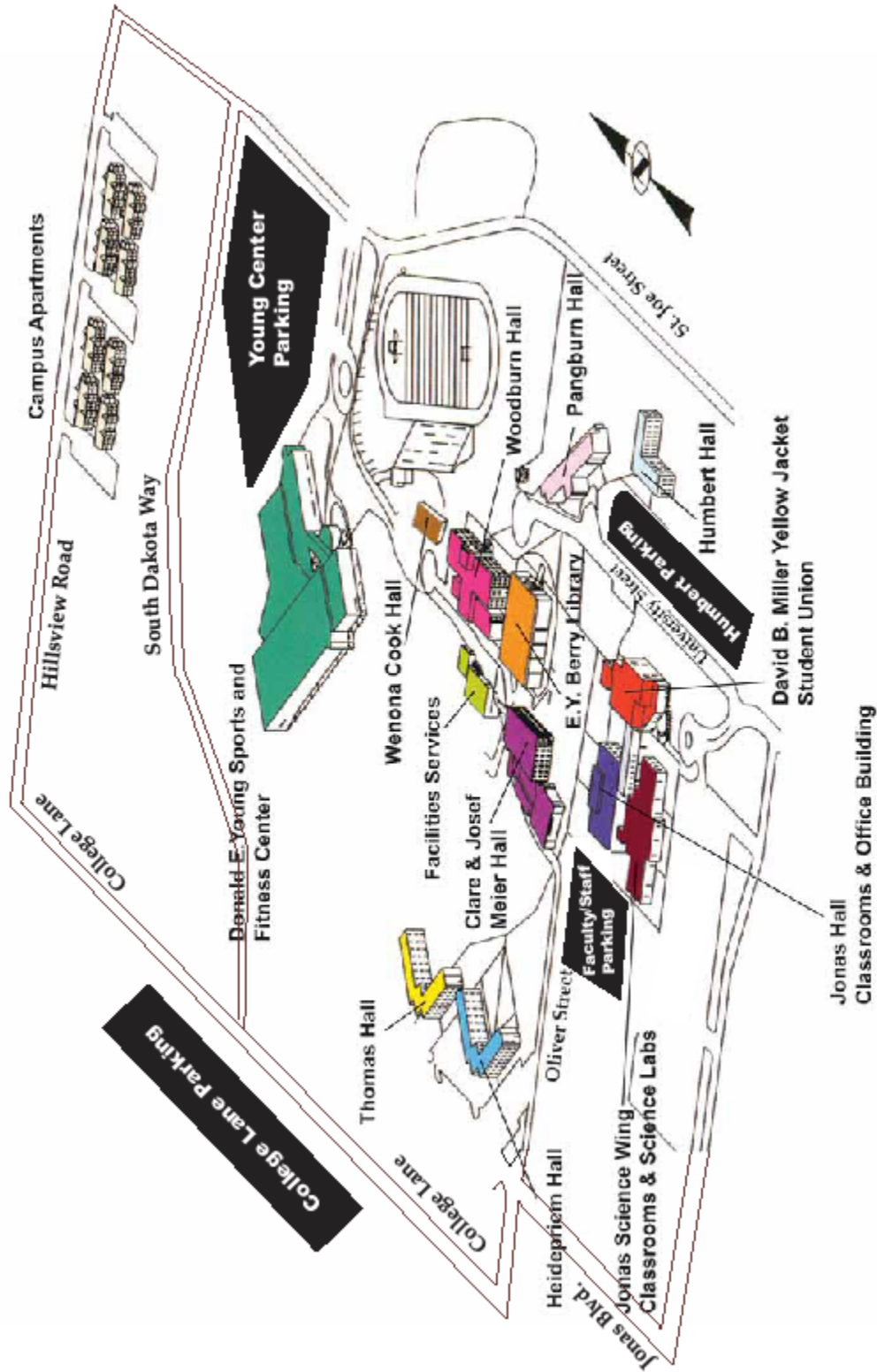
- From I-90, take Exit 12.
- Travel west on Jackson Blvd for about 1 mile.
- Turn right on University Street.
- Turn left on Mason Street.
- The **Jonas Parking Lot** is on the right.  
<OR>
- Turn right on Jonas Blvd and then right at the 4-way stop to access the **Faculty/Staff Parking Lot**.

### Notes:

- All conference events, except for the workshop and banquet, will be held in **Meier Hall**. Meier Hall is the first building off the NE corner of the Faculty/Staff Parking Lot.
- The **Faculty Staff Parking Lot** is the closest parking lot to meeting rooms but may not accommodate all visitors on Friday afternoon.
- No parking permit is required in either lot. If you receive a parking violation for no permit in the above parking lots (or any other lot on campus) please give the ticket to the program chair, Daluss Siewert
- Driving to campus from I-90 via Exit 8 is not recommended due to road construction.

Printable maps: [BHSU Campus](#), [City of Spearfish](#)

# BHSU Campus Map



## **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 Available

Applications for Section Activities Grants are again being accepted to assist Section members with projects in support of the Section Mission. Proposals may request up to \$500; matching funds are preferred, but not required.

The project director(s) must be a current member(s) of MAA, and the proposal must be clearly tied to one or more of the Rocky Mountain Section Mission Goals. A copy of these goals appears on the inside back cover of this newsletter. All applications must include the following:

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

Upon completion of the project, the director(s) of the funded projects are required to file a brief report (no more than one page), and to present a project report at the next meeting of the Section.

Two non-officer members of the Section will review applications; the Executive Committee on the basis of the reviewers' reports will make final funding decisions. Although applications are accepted at any time, please note that notification of funding decisions may take up to two months following receipt of the application by the section secretary.

### 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.

## Section Logo Shirts Available

First unveiled at the 2002 Spring Section Meeting in Laramie, Rocky Mountain Section Logo shirts are now available in two styles: a **long-sleeved button-front denim shirt** and a **short-sleeved white polo shirt**. Both styles are 100% cotton and feature the section logo in high-quality color embroidery on the front left.

In order to promote awareness of the MAA and the Rocky Mountain Section, prices have been set in order to recover production costs, just **\$35 for denim** and **\$30 for polo**. Proceeds, if any, will be used to support section activities.

If you are interested in obtaining one of these special shirts, please contact **Janet Barnett**, [janet.barnett@colostate-pueblo.edu](mailto:janet.barnett@colostate-pueblo.edu), with information on desired quantities and sizes.



## 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  $\pi$ ; 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

20th annual ICTCM; San Antonio, TX; March 6-8, 2008

NCTM annual meeting; Salt Lake City, UT; April 9-12, 2008

**MAA Rocky Mountain Section Meeting  
Black Hills State University  
Spearfish, SD**

**April 25-26, 2008**

MAA MathFest; Madison, WI; July 31 – August 2, 2008

Joint Mathematics Meetings; Washington, DC; January 5-8, 2009

NCTM annual meeting; Washington, DC; April 22-25, 2009

**MAA Rocky Mountain Section Meeting  
Colorado School of Mines  
Golden, CO**

**April, 2009**

MAA MathFest; Portland, OR; August 6-8, 2009

Joint Mathematics Meetings; San Francisco, CA; January 6-9, 2010

NCTM annual meeting; San Diego, CA; April 21-24, 2010

MAA MathFest; Pittsburgh, PA; August 5-7, 2010

Joint Mathematics Meetings; New Orleans, LA; January 5-8, 2011

NCTM annual meeting; Indianapolis, IN; April 13-16, 2011

Joint Mathematics Meetings; Boston, MA; January 4-7, 2012

NCTM annual meeting; Miami, FL; April 25-28, 2012

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

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

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

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

MAA 100<sup>th</sup> Anniversary MathFest, Washington, DC; August 5-8, 2015

**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)? \_\_\_\_\_

In the space below, please briefly describe the unusual 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 form should reach Section Secretary by December 1.

Complete nomination materials should reach Section Secretary by January 15.

Please consult section webpage (<http://www-math.cudenver.edu/~maa-rm/>) for complete guidelines.

Section Secretary - Hortensia Soto-Johnson, UNC Dept of Mathematical Sciences, Ross 2240 A, Greeley, CO 80639.

## 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: Hortensia Soto-Johnson, MAA Rocky Mountain Section Treasurer/Secretary: UNC Dept of Mathematical Sciences, Ross 2240 A, Greeley, CO 80639

## **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.