ROCKY MOUNTAIN SECTION OF THE MATHEMATICAL ASSOCIATION OF AMERICA

Check out our **Web page**   http://www-math.cudenver.edu/~maa~rm

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SPRING MEETING of ROCKY MOUNTAIN SECTION

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University of Colorado at Denver and Metropolitan State College of Denver
April 11-12, 1997

Invited Address by **Keith Devlin**, *FOCUS* Editor

        If you wish to give a talk or organize a panel discussion, contact **Bill Briggs** or
Tom Kelley at the addresses given above <u>as soon as possible.</u>

This year's **Section Nominating Committee** consists of:
Janet Burgoyne (Chair), South Dakota School of Mines and Technology, Rapid City, SD, 57701
Gary DeYoung, Mesa State College, Grand Junction, CO, 81502
Bill Hoard, Front Range Community College, Larimer Campus,
          4616 S. Shields, Ft. Collins, CO, 80526   (970) 226-2500

For this meeting the committee needs to nominate a Chair-Elect and a Vice-Chair (who must teach at
a two-year institution). Please feel free to convey recommendations to the committee.

Revision of Section By-Laws

After discusions at the last Annual Meeting of the Section, the Executive Committee offers the following amendment to the Section By-Laws.

Amend Article III- Officers

Replace the present wording that the "Chairperson-Elect is elected each Annual Meeting for a one-year term, following which a one-year term as Chairperson, and a one-year term as Past Chairperson are automatic."

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

The reason for the change is that the job of Chairperson requires more learning time to become effective at the job. Rocky Mountain is one of the very few sections which still have the Chair only serve one year. Under this change there always would be either a Chairperson Elect or a PastChair, but not both, on the Executive Committee. Under our rules for amending the By-Laws, this amendment must be presented to our members twenty days prior to our Annual meeting. If it is approved there, then the Board of Governors must approve it before the amendment becomes effective. Hence, if we approve this amendment at our meeting in 1997, the first election of a two-year Chair would occur in 1998.

FREE PIZZA

The Rocky Mountain Section of the MAA has decided to open a pizzeria in order to do research on the Pizza Coloring Problem......No, not really, but there is free pizza involved in the following proposal directed at Math Clubs and/or Student Chapters.

The Rocky Mountain Section of the MAA has funds from the Exxon corporation to spend on an Internet activity for Math Clubs and/or Student Chapters in the section. The idea behind this activity is to open more communication links for the faculty and students throughout this far-flung (geographically) section. It will also tie in nicely with the 1997 MathAwareness Week theme relating to the Internet. Here is our proposal for distributing these funds.

1.) Have the Math Club/Student Chapter at your school set up its own webpage. Students are an excellent resource for doing this kind of thing. Link this web page to your departments page . This means that your club can then be linked to the Sections page and eventually to the Student Chapters page at the MAA site.

2.) Notify Tom Kelley via e-mail at [kelleyt@mscd.edu] that your page is ready to be viewed at (give the http address here) and he will proceed to view your club's page.

3.) After viewing your club's page Tom Kelley will notify Bill Ramaley to send a check made out to (your name)/(math club). This check will be in the amount of $30.00 to be used for purchasing PIZZA for a math club meeting (say an end-of-the-semester get together or just an intro to cruising the net sponsored by the math club). This would also be a good time to have your students sign up for the Student Membership to the MAA...it is an excellent deal...well worth the fifteen dollars. The only restriction on the spending of the money is that it be spent for food for a math club function.

If you are the advisor (or whatever the term is) of an undergraduate mathematics club at your school, please reply to our offer with an e-mail even if you decide NOT to do it. Part of this activity is to update our section contacts and to increase the communication throughout the section. Thanks very much for working with us.

Tom Kelley MSCD and Bill Briggs CUDenver (see addresses above)

Mathematics Association of America Rocky Mountain Section Report-1996 Meeting

The annual meeting of the Rocky Mountain Section was held April 19-20, 1996, on the campus of Mesa College in Grand Junction. This meeting was a joint meeting with the Intermountain Section and a regional meeting of Kappa Mu Epsilon. There were a total of 66 contributed papers, 24 by students, of which 13 were from the Rocky Mountain Section. All of these values were records for the Section. Total registration was over 200, an outstanding turnout. The program co-chairs were Clifford Britton and Carl Kerns of Mesa State College.

The invited addresses were –

Secrets and Geometry, Dr. Gustavus Simmons, Rothschild Professor of Mathematics at
 Cambridge University and Visiting Fellow of Trinity College;
 Retired Director for National Security Studies, Sandia Laboratories

Equalization and Optimization by Colonies of Foraging Ants, Dr. Fred Adler, Univ. of Utah

A Gossipy Historical Story about Factorization in L^1, Dr. Kenneth Ross,
 University of Oregon, President of MAA

Patterns, Symmetry and Chaos, Dr. Martin Golubitsky,
 Cullen Distinguished Professor of Mathematical Biology, University of Utah.

At the banquet Friday evening, Zenas Hartsvigson (U of Colorado, Denver) was recognized as the 1996 winner of the Distinguished Teaching Award. Recognition was made of those members who had just completed 25 years in the MAA: Stephen D. Bronn, Douglas F. James, J. Richard Lundgren, John S. Maybee, and Franklin P. Witte. Finally, Carl Kerns recognized the student presenters of papers. Then Dr. Ross, our banquet speaker, was introduced by Ed Hawkins.

In addition to the above addresses, the program consisted of the following:

Workshop on new TI-92, Richard Tebbs of Southern Utah University

Mini-Course on *Combinatorics via Functional Equations*, Donald Snow, Brigham Young Univ.

Contributed talks – (a * indicates a student presenter)

How Dense will We get?
 Lee Badger, Weber State Univ.
An Inductive Algorithm for Producing Graphs of N-cubes
 * William Van Bain, Mesa State College
Knights Tours and Magic Squares
 * Barry Bolof, Colorado College
Geršgorin and Beyond
 * Jason Knight Belnap, Utah State Univ.
Bootstrap and Delta Estimators
 * Jerome Bennett, Univ. of Southern Utah

College Algebra Concept Learning Enhanced with Graphing Calculator
 Jeffrey Berg and Pat Hauss, Arapahoe Community College
Waiting for Change at the Box Office: A Fun Combinatorial Problem
 Shahar Boneh, Metro State College at Denver
Classroom Case Studies in Liberal Arts Mathematics
 William Briggs, Univ. of Colo. – Denver
The History of Fermat's Last Theorem
 * Amanda Brown, Univ. of Southern Utah
Queen's Domination of $M \times N$ Chessboards
 * Aesoo Chung, Univ. of Colo. – Denver

Counting Parallelograms in a triangulated equilateral triangle
         * Cristine Collier, Univ. of Northern Colo.
Examples of Noncommutative Algebraic Geometry
         Robin Cruz, Univ. of Southern Colo.
An Elementary Use of Wavelets to Choose the Optimal Bin Width of a Histogram
         James E. Daly, Univ. of Colo. at Colo. Springs
Fermat's Last Theorem – A Marvelous Proof
         Harold Davenport, Mesa State College
Exploring Reflections: Uniform Illumination of Proximal Objects using Spectral Reflector
         Gary DeYoung, Mesa State College

Roller Coaster Design
         * Domenica Donovan, Univ. of Denver
A Computerized Mathematical Exploration
         George Donovan, Metro State College at Denver
Maximally Even Sets in Magnetic Ordering
         J. Douthett, Albuquerque Community College; R. Krantz, Metro State College at Denver
Teaching Differential Equations with Mathematica
         Bill Emerson, Metro State College at Denver
An Asymptotic Formula for Powers of Binomial Coefficients and about Inductive Reasoning
         J. Farmer and S. Leth, Univ. of Northern Colo.

Squaring a Tournament: A Proof of Dean's Conjecture
         David Fisher, Univ. of Colo. at Denver
Demonstration of the Geometer's Sketchpad Software
         Robert J. Fisher, Idaho State Univ.
Math and Bungee Jumping
         * Shannon Flowers, Westminister College
Voting Procedures which can be Determined by Pairwise Elections between Alternatives
         Lawrence Ford, Idaho State Univ.
Bounded Principal Minor Ratios of Positive Semidefinite Matrices
         * Tracy Hall, Brigham Young Univ.

Teaching Calculus using Scientific WorkPlace
         Darel Hardy, Colo. State Univ.
The Games People Play
         * Ann Marie Harris, Utah State Univ.
Ripping a Text to Bytes
         Robert Heal, Univ. of Southern Utah
The Gamblers Ruin
         * Derek Hein, Univ. of Southern Utah
Some Observations on the Integers mod (pq)
         Jay Huber, Idaho State University

Toward a Construction of the A-Cellular Approximation of a Space
         Michele Intermont, Mesa State College
Writing in Mathematics
         Matthew Isom, U. of Northern Colo.
The Axiom of Choice
         * Asim Jalis, Utah State Univ.
Effects of School Reform on Math Departments
         Larry Johnson, Metro State College at Denver

Self-Similarity in Magnetic Phase Diagrams
Richard Krantz, Metro State College at Denver & J. Douthett, Albuquerque Com. Coll.
Cyclic Subspaces, Invariant Polynomials, and Regression
Patrick Lang, Idaho State Univ.
Easy Continued Fraction Convergents
Kay Litchfield, GTE/ Univ. of Utah
Using Rubrics in the College Math Classroom
Jim Loats, Metro State College at Denver
Galois Representation Attached to Elliptic Curves
* Melissa MacDonell, Mesa State College

A Mathematical Model of an Oscillating Chemical Reaction
* Troy McVay, South Dakota School of Mining and Technology
Report on NSF Young Scholars Grant for Denver Public Schools
Tino Mendez and Ernest Cisneros, Metro State College at Denver
Nagell-Lutz Theorem
*Robin O'Connor, Mesa State College
Parabolic Primality Testing
* Colin O'Donnell, Metro State College at Denver
The Real Positive Semidefinite Completion Problem for Nonchordal Graphs: Revisited
Mohammad Omran, Brigham Young Univ.

Perfect Card Shuffling
Eric Parkard, Mesa State College
Smoothing Splines — Current Status and New Developments
* Crain Pringle, Idaho State Univ.
A Mathematical Model of Bacterial Gene Regulation
Jihad Qaddour, Mesa State College
Horner's Algorithm, Base Conversion, Remainder Theorem, etc.
Scott Searcy, Idaho State Univ.
A Symbolic Manipulation Program for Learning Algebra
Jerry Shultz, Metro State College at Denver

Romberg Integration, Rearranged
Vencil Skarda, Brigham Young Univ.
Table Algorithm Takes the Hard Work Out of Finding Series Solutions to DE's
Don Snow, Brigham Young Univ.
Technological vs. Traditional Approach in Conceptual Understanding of Series
Hortensia Soto-Johnson, Univ. of Southern Colo.
Knights Domination of a $k \times n$ Chessboard
* Anne Spalding, Univ. of Colo — Denver
Stability Properties for the Collection of a Function's Attractive Sets
T. H. Steele, Weber State Univ.

The Dilemma of a Prisoner Named C3PO
* Jason Stetton, Colorado College
Computers and 3-D Cognition
Igor Szczyrba, Univ. of Northern Colo.
A Nonlocal Problem in Shear Banding
Paul Talaga, Weber State Univ.
Two Tree Mountain Pine Beetle Model
* Jessica Tams, Utah State Univ.

Gauss and the Computation of Planetary Orbits (Part II)
        Don Teets, South Dakota School of Mining and Technology
Population Model Applied to Easter Island Data
        * Brian Traver, Weber State Univ.
The "Calculus for Kids" Project
        * Rick Trujillo, Univ. of Colo. — Denver
Solution to $\Delta f / \Delta x = f$
        Dick Walker, Ft. Lewis Col.
The Pipeline Problem: A Multimedia Approach
        * Greg Wheeler, Utah State Univ.

Gauss and the Computation of Planetary Orbits (Part I)
        Karen Whitehead, South Dakota School of Mining and Technology
Fractions in Finite Rings
        Jim Wolper, Idaho State Univ.
The Exponent Set of a Primitive matrix with a Primitive Submatrix
        Cindy Wyels, Weber State Univ.

Business Meeting of the Rocky Mountain Section of the MAA   8:15 am, Saturday, April 20, 1996

Chair Ed Hawkins called the meeting to order, with approximately 30 members present.

Minutes of the 1995 meeting at USC were approved as circulated. The Treasurer's report, a summary of which follows, was approved.

Financial Statement April 19, 1996 Rocky Mountain Section Mathematical Association of America

<u>Savings Account</u>

March 31, 1995 Balance	4179.58
Interest paid Ap 1, 1995 to Mar 31, 1996	138.95
March 31, 1996 Balance	4318.53

(note: Included here is a $1500 fund which can be loaned for expenses in connection with a summer short course offered in the section)

<u>Checking Account</u>

April 22, 1995 Balance		414.23
Income		
Subvention from national MAA (annual support)		500.00
additional support (to bring total up to last years allocation)		200.00
Exxon Grant for student activity on Internet		750.00
	Total	1450.00
Expenses paid		
Student Internet expenses		254.39
Newsletter mailing from FLC		333.18
	Total	587.57
Net Change in Checking Account		862.43
Balance April 19, 1996		1276.66

Note: The Exxon student grant of $750 has had only $254.39 spent, leaving $495.61 encumbered.

Gail Gliner, Chair of the Nomination Committee, submitted their report. Bill Ramaley for Secretary/Treasurer; Karen Whitehead (SDSMT) or Shahar Boneh (MSCD) for Chair. Karen Whitehead was elected. It was announced that a mail ballot conducted by the national MAA resulted in the election of Janet Barnett (USC) had been elected as Governor of the Rocky Mountain Section. This is a three-year term.

Darel Hardy, the Chair for 1996-97, was introduced.

A report was made of the Student Internet activity. Groups of students at four schools (UNC, FLC, USC, and CU-D/MSCD communicated over a 2-day workshop, learning how to use the Internet. As part of this there was a 15-item Scavenger Hunt, with fascinating questions and topics, both mathematical as well as general. Examples are: "Some first cousins of the Fibonacci numbers are the Pell numbers. Find the formula for the Pell numbers and give the first ten Pell numbers."; "Who Gave the 1989 SIAM von Newmann Lecture"; "A well-known story claims that there is no Nobel prize in mathematics because a mathematician seduced the wife of Alfred Nobel. Give two reasons why this story either is or is not true"; "A new book has just been published about the great Indian mathematician Ramanujan. The title is *Ramanujan: Letters and Commentary*. Find the publisher, author(s) and the number of pages." For complete list of questions and the students reponses, contact Tom Kelley at MSCD.

A member asked whether a student group needed to be a MAA student chapter in order to participate in the Internet Activity. The answer is no. Contact Tom Kelley for details. He and Bill Briggs (UC – D) plan to set up a Web page for the Rocky Mountain section. Details on this have not been worked out.

Governor Tino Mendez gave a summary of his written report, which is found attached to these minutes. Janet Barnett, incoming Governor of the Section, reminded attendees of the Section Activities Fund, which can grant up to $500 for an activity of benefit to the Section. For details of how to apply for this money, contact Bill Ramaley at FLC.

A discussion ensued over Colorado Governor Romer's recognition of student's mathematical achievements, it was mentioned that there also should be recognition of faculty achievements. In particular, the winner of the Distinguished Teaching Award should be recognized. The Section agreed to help support this event.

The business meeting ended with a motion of appreciation for the hospitality of Mesa College and hard work of everyone – faculty, students, and administration – who contributed to the outstanding success of this meeting. Especially: Cliff Britton and Carl Kerns (the program co-chairs), and Ed Hawkins, the Chair of the Mesa College Mathematics Department.

William C. Ramaley, Sec'y/Treas
Rocky Mountain Section MAA

New Governor's Report by **Janet Barnett**, University of Southern Colorado

My first Board of Governor's (BOG) meeting was in Seattle this past August. Seattle itself was wonderful, as were the joint meetings. The Seattle meeting was the last joint summer meeting with the AMS, whose members currently feel they are better served by AMS Special Topic meetings. Seattle was NOT, however, the last MAA summer meeting. The 1997 MAA Mathfest will be held in Atlanta, August 2 - 4. MAA is committed to making this first solo meeting a success.

The one item from the BOG meetings about which I would like some input concerns BOG position statements. In particular, two policy statements were considered in Seattle, the first

concerning Affirmative Action and the second concerning California's Proposition 187 which denies public education in California to undocumented residents of the state. (The Affirmative Action statement was sent back to committee, the Proposition 187 statement passed.) The concern raised by several board members is whether the MAA BOG should be issuing "political" statements of this nature on behalf of its membership. As a new governor, I would be interested in your thoughts on this matter, as well as how you would define "political", especially as the term relates to educational issues.

Other than attending the Seattle meeting, my primary action as governor has been to ask members of our section currently serving on National MAA Committees to provide us with some information about the workings of those committees. There are a number of you who are serving on such committees who should expect to hear from me with a request for a report. The first of these appear in this newsletter from Tino Mendez who serves on both the Development Committee and the Finance and Investment Committee, and Dick Gibbs, who has been appointed to a second term as the Chair of the Committee on American Mathematics Competitions (CAMC).

Report from **Tino Mendez**, Metropolitan State College of Denver

The MAA Investment Committee's investment decisions last year were extremely successful, increasing the MAA portfolio from $1.5 million to nearly $2 million. In addition, certain cash flow transfer issues were successfully addressed. This year, a consultant was hired to evaluate our current policies and investment practicies. The consultant facilitated a policy review and issued a report that was generally complimentary of the Investment Committee's work. Currently, the committee is considering the possibility of hiring an outside investment management firm to carry out the MAA investment function under the committee's direction and oversight. The MAA Development Committee is involved in a planned giving fund raising campaign to increase the MAA Endownment from the current near $2 million to $10 million. This campaign is based on the recommendations of an outside consultant who was hired about three yeaars ago to address the concern of the Committee and the Board of Governors that the MAA Endowment was sadly inadequate, particularly so, if measured relative to the budgeted level of operations of the Association and the corresponding size of similar endowments elsewhere. The MAA Legacy newsletter was born and MAA members that have requested information about estate planning and/or have expressed an interest in considering the MAA when making such decisions are being contacted.

Report on Competitions, submitted by **Dick Gibbs**, Fort Lewis College

The Committee on the American Mathematics Competitions (CAMC), is co-sponsored by the MAA with a number of professional mathematics organizations, and oversees the preparation of four annual national mathematics examinations for junior and senior high school students: the American Junior High School Mathematics Examination (AJHSME), the American High School Mathematics Examination (AHSME), the American Invitational Mathematics Examination (AIME) and the USA Mathematics Olympiad (USAMO). In addition to providing students with challenging mathematics problems designed to encourage their interest in mathematics, these examinations lead to the selection of the 6 students who represent the United States at the annual International Mathematics Olympiad (IMO).

In the 1995-1996 competition year, 241,790 students in grades 8 and below participated in the AJHSME, with an average score of 10.60 out of 25, and 24 perfect papers. 366,870 students competed in the AHSME, or whom approximately 47% were female. Of the 9,569 students invited to compete in the AIME, 7,456 accepted, of whom 18% were female. The mean AIME score was 2.47 out of 15, with a median of 2. Based on a combination of their AHSME andd AIME scores, 168 students were invited to participate in the USAME; the top six scorers represented the United States in the IMO held in Bombay, India.

Additional news on the IMO (from Ken Ross' report to the BOG)

At the 1996 IMO hosted by India, an invitation was made to the United States to host the IMO in the year 2001. The Board of Governors strongly feels that the Unitied States should take its turn in hosting an International Olympiad since many other nations, most with far more limitied resource than ours, have already done so. A Task Force on Olympiad 2001 was formed to get IMO 2001 off the ground, and has already secured initial funding of $100,000 a year for five years from the Department of Education to start up the new nonprofit organization that will be comprised of a coalition of mathematical organizations.

MAA ROCKY MOUNTAIN SECTION GOVERNOR'S REPORT submitted by C. G. "Tino" Mendez

San Francisco Meeting, Jan. of 1995

The RM Section was well represented in San Francisco. All of the officers were in attendance, so we took advantage of the opportunity to have a very productive RM Section Executive Committee working lunch. Janet Barnett chaired the meeting as we moved through a busy agenda, including the Section's Mission Statement and a number of initiatives. Bill Ramaley's new book (just published) was introduced by W.C. Brown Publishers at the Exhibits. James Curry was featured as the NAM William W.S. Claylor Lecture keynote speaker and Janet Barnett and A. Duane Porter presented papers/talks. Tom Kelley was involved with a number of minicourses and poster sessions. Jim Loats continued his work as a member of the MAA COMET (Teacher's Preparation/Training) Committee. A. Duane Porter was also engaged with the linear algebra reform agenda. Dick Gibbs gave his typically excellent report to the Board of Governors on the Mathematical Competitions.

A number of reports were submitted. The MAA Assessment of Student Learning, the Two-Year College Department Guidelines, the MSEB Teacher Preparation Circulating Draft, the new GRE Mathematics Exams, the New Standards for Introductory College Mathematics, the CUPM Engineering Curricular Reform. There was an interesting panel discussion on the CTUM/CUPM agenda, and others focusing on the concerns of graduate students and new doctoral recipients, job opportunities in industry, and Project NEXT.

It appeared to me that the meeting had four major foci: 1) undergraduate mathematics education reform (being supported aggressively by a number of new NSF programs); 2) the appropriate role and/or response of the college and/or research universities mathematics community to the mathematics education reform efforts currently taking place at all levels (elementary and middle schools included), and the interplay of these efforts with calculus reform and other curricular reform issues (e.g., linear algebra and engineering); 3) the professional training of teachers at all levels, including the preparation of graduate students for college teaching, 4) and the reward structure within the profession.

These issues were reflected at the Board of Governors' meeting where MAA President Kreider outlined a number of outreach initiatives. He reported on his work with the NCTM on the Mathematical Competitions and with the College Board on equity/access concerns related the new calculator-based SAT's. The MAA Gopher and corresponding electronic services, including the publication of electronic journals were on the agenda. The MAA Development Committee announced a new planned-giving campaign to increase our endowment from the current and seriously inadequate $2 million level to a modest $10 million goal.

Burlington Meeting, August 1995

Vermont was beautiful. The people were wonderful. The atmosphere was rural, warm, and delightful. I fell in love with New England.

The Board continued to address the question of summer meetings and their financial viability as a follow-up to a discussion that we started in San Francisco. Strategic decisions were made to have these meetings in attractive, large urban locales that would be within driving distance of large population/membership centers and to specifically tailor the focus of the summer programs so as to differentiate them from those of the winter meetings (e.g., to emphasize educational/professional development/student issues and corresponding research as opposed to traditional mathematical research). Management informed the Board of an extensive administrative restructuring at the MAA Washington, DC National Office. Numerous functions will be "outsourced", six staff positions eliminated, three new higher management positions created. Some of us expressed strong reservations at the manner in which this decision was made with little if any input from the Board.

This meeting focused on educational issues. The NCTM Standards and their Implications for College Level Teaching, the NCTM Algebra Vision Statement, the State Systemic Initiatives (SSI's) and systemic reform in mathematics, on K-12 and Higher Education Collaboration, on interdisciplinary courses in undergraduate education, on intervention projects for pre-college minority students, on women career paths, on Integrated Mathematics Projects, on popularizing mathematics, on assessment using the graphing calculator.

Orlando Meeting, January 1996

We continued the discussion on MAA/AMS Science policy and the proposed federal budget's impact on the NSF's budget and education and mathematical research.

The Board of Governors passed a resolution condemning the University of Rochester's decision to eliminate their mathematics Ph.D. program. The Joint Committee on Women's recommendation on reporting information on the participation of women/minorities in MAA activities was approved. Other resolutions on California Proposition 187's impact on education and the University of California Regents' recent decision on Affirmative Action were debated and returned to committee.

It was agreed to discontinue the publication of UME Trends (not economically feasible) and to encourage the submission of articles of the like to the FOCUS.

Governor's Agenda

This is my last year and my last report to you as your Governor. I want to deeply and sincerely thank you for the trust you placed in me by electing me to this office and for the fantastic opportunity you allowed me to serve you. It has been my humble honor and distinguished pleasure. You are an exceptional group of dedicated and committed professionals and you have made me proud.

On National Issues

As I have mentioned before, the MAA has had excellent leadership during the past ten years, and by and large has been well managed during the 1990's. However, we have inherited some problems in the area of financial management and reporting where I have focused my work within the Board. I believe we have taken some positive steps to address these problems during my tenure. They involve the declining trend in membership during the past two years, the elasticity of demand of our dues structure and the corresponding impact on membership, the membership recruitment function, appropriate constraints on administrative costs, appropriate accounting controls to accurately measure the costs of services vis a vis the interest/support of the membership for such services, the fiduciary role and responsibility of the Board, the openness and corresponding reporting practices of management, the appropriate accounting of the building fund, the Greater MAA fund, the grants activity, the management of our investments and endowment and a development campaign to strengthen them and the association.

On Sectional Issues

Here is a progress report on corresponding items as reported in the last newsletter.

a) and b) We have built and nurtured strong structural relationships with the CCTM and COMATYC that have promoted vigorous collaboration among all mathematics educators in Colorado. I am hoping we can extend those activities to Wyoming and South Dakota and encouraged by the implied interest that has been generated.

c) We have started an MAA department representatives network within the section that promises to streamline and expedite the conduct of our business through the electronic media. It should also serve as the leadership structure within the section.

We have established a humble fund to support section activities and approved the Section's Mission Statement under the leadership of Janet Barnett, our former Chair.

d) Work on coordinating the mathematics/mathematics education awards in the state of Colorado is continuing. We also recommended a new national MAA award be established to recognize the contributions of higher education faculty to K-12 education.

e) Tom Kelley received an Exxon grant to conduct a section-wide problem solving session among the MAA Student Chapters through the Internet. This program was successfully implemented last fall. He has continued to work on promoting the development of MAA Student Chapters and the MAA department representatives network.

f) Jim Loats continues to work on the new MAA Lecture Series.

g) Ernest Cisneros and I received an NSF Young Scholars grant to establish a middle school intervention program for disadvantaged students in the Denver Public Schools following our 1994 SUMMA Planning grant. This program was successfully started last year. We are willing to help others interested in replicating this program.

h) Three MAA Rocky Mountain Section scholars were selected to participate in Project Next last year.

Karen Whitehead, Chair's Report

Committee on Sessions of Contributed Papers

I serve on the Committee on Sessions of Contributed Papers which has the responsibility of organizing sessions for both the annual MAA/AMS Joint Meetings and for the summer Mathfests. In a sense the job is an easy one for we often have a long list of volunteers who have expressed interest in organizing sessions in their areas of interest. On the other hand, difficult choices sometimes need to be made in order to provide a range of sessions which will appeal to a wide audience. Calls for session organizers go out in the FOCUS approximately a year in advance of meetings. I would like to see increased participation by Rocky Mountain Section members in these sessions. If you have ideas on topics for sessions, if you would like to organize a session, or if you have a paper you would like to present, please let me know. My email address is kwhitehe@silver.sdsmt.edu and my phone number is (605) 394-6980. I can take your ideas forward or help put you in touch with session organizers.

Report from the MAA Section Officers Meeting, Seattle, WA, Aug. 10, 1996

Organizational Changes: A new division, Member Services & Programs, has been created in

the national MAA office. Dan Kalman is the new associate executive director and will have responsibility for sections and programs such as SUMMA. Fernando Gouvea will be managing the MAA web pages and offers to help sections create their own pages. Currently 17 sections have home pages linked to http://www.maa.org. He is also willing to accept items which sections would like publicized in MAA OnLine. David Stone is the new chair of the Committee on Sections and will take office after the January meetings in San Diego. A new committee is being formed on local and regional competitions.

Section awards for distinguished teaching: Selection committee chairs will be invited to attend the San Diego meetings. Nomination forms will be the same as last year and must be submitted before Feb. 1 in order to be considered for national awards. There was a discussion of guidelines for monetary awards in conjunction with this award. There are no guidelines currently. Some sections give a donation to the recipient's library; others suggested a gift certificate for MAA publications.

Information dissemination: The MAA Section Officers Handbook and Guidelines for MAA Sections Officers are being updated by national. There was lengthy discussion of better ways to get this information out to the sections. Some section officers were unaware of their existence. It was suggested that chairs-elect should also get these handbooks as well as the current chair and secretary/treasurer. A session will be held at the San Diego meetings on the Public Information Officer's role within the section. Ideas such as putting section newsletters on the web, and looking at a Math Awareness Week site were mentioned.

Project NEXT Fellows: New Experiences in Teaching is a program for new Ph.D.s which encourages networking among the 60-80 participants each year. Participants attend two Mathfests and one annual meeting and organize projects of various sorts. Currently we have 10 Project NEXT fellows from the Rocky Mountain Section. It was emphasized that fellows are a resource to the section and was suggested that they be asked to organize a session at section meetings.

Department News

(If you have news for this department, contact Bill Ramaley)

Adams State College (from Ed Adams)

Matt Ikle´, Ph.D., U. of Wisconsin, joined the faculty. He was recently at Univ. of Texas, El Paso.

The Department is looking for a replacement faculty member in Computer Science. Susan Han left for industry.

Work is progressing on the new Science and Mathematics building, although the bad news is that the cost came in at 1.5 million over budget.

Distinguished Teaching Award. This recognition is a reaffirmation of our commitment to excellence in teaching. If you wish to nominate someone for this award, please send the person's name to Bill Ramaley. He will handle the details. Past awardees are:

1992, Jack Hodges, University of Colorado, Boulder
1993, Gerald Diaz, U. S. Air Force Academy,
1994, A. Duane Porter, University of Wyoming
1995, William D. Emerson, Metropolitan State College of Denver
1996, Zenas Hartvigson, University of Colorado at Denver

Colorado Mathematics Education Resource List
CMERL

The Colorado Council of Teachers of Mathematics (CCTM) and the Rocky Mountain Section of the Mathematical Association of America (MAA) maintain and provide a list of people who are expert in various aspects of mathematics and mathematics education in the state of Colorado. CMERL has two main purposes. First, to provide access for mathematics teachers K - 16 to knowledgeable experts both for technical support and for visiting presentations, and secondly, to provide media organizations and others outside of these organizations with easy access to knowledgeable experts in mathematics and mathematics education. The list includes outstanding elementary, middle and high school teachers together with college/university professors and other professionals who are expert in mathematics, its teaching and learning and its applications.

To be on this list, please **complete this application and mail it** to the address below. Please copy and pass it along to others.

Date _____ / __ / ____

Name _____ Position _____

Street _____

City _____ CO Zip _____ - _____

Phone: Days: (____)_____ Eve's: (____)_____

Fax: (____)_____ E-mail address: _____

Department/School/Institution: _____

My institution can pay my mileage expenses: (Circle) Yes   No

My expertise in Mathematics or Mathematics Education includes:

_____

_____

_____

Yes   No   I am willing to respond to **MEDIA** requests for information on the following topics related to mathematics. Note level K - 16 :

_____

_____

_____

I am prepared to give presentations with the following titles:
Title of talk   Audience level(K - 16)

_____

_____

_____

_____

_____

_____

Reference: (Please give the name of a person who can be a reference for you. Higher Ed. should use a K-12 colleague and visa versa.)

_____ Phone (___)_____

CMERL c/o Dr. Jim Loats, Campus Box38, Metropolitan State College of Denver, P.O. Box 173362, Denver, CO 80217-3362 or e-mail to loatsj@mscd.edu   Phone: (303)556-3109

NEWSLETTER
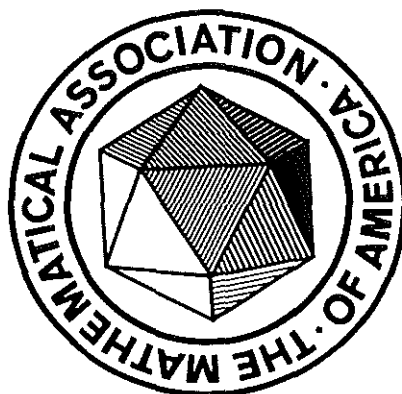
Rocky Mountain Section
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