

Rocky Mountain Section Report

The annual meeting of the Rocky Mountain Section was held April 12-13, 1991, on the campus of the University of Northern Colorado (UNC) in Greeley, Colorado. The program chairs were Don Elliott and Bill Bosch of UNC. Approximately 156 registered for the meetings and visited the book exhibits provided by 5 publishers. Eleven of the registrants were students.

The major address was "Interesting Partition Identities" by Deborah Tepper Haimo, president of the MAA. Dr. Haimo also gave the banquet address on "Vignettes of Some Mathematicians."

The program consisted of the following.

Workshops by: Karen Tonso, Metropolitan State College on "Nine Women Who Count."

Bill Emerson, Metropolitan State College on "Teaching Calculus with *Mathematica*"

Panels on: "Quantitative Literacy", chaired by John Hodges, U. of Colo., Boulder

"Mathematical Modeling", chaired by Tom Kelley, Metropolitan State College

"Impact of NCTM Standards on the College classroom" chaired by Jim Loats,
Metropolitan State College

Contributed talks. "Solving Mathematical Problems Faster", Major Steven R. Capehart, USAF

"A Review of Hand-held Graphic Calculators", Jose Cisneros - Metropolitan State College

"Mathematics and Education-A Compatibility Problem", Igor Szczyrba, University of
Northern Colorado

"The VCR Tape Counter: Inverting the Winding Function", Richard Roth, CU-Boulder

"The Modular Approach to Teaching Calculus I", Jon M. Plachy, Metropolitan State

"Statistical Application of the Nelder-Mead Optimization Technique", Ann Thomas
University of Northern Colorado

"Closed Forms of Trigonometric Integrals", Bella Wiener and Joseph Weiner, U. of Texas

"The Hubble Telescope: An Application of the Stone-Weierstrass Theorem",
Harold Davenport, Mesa College

"Mathematical Recreation: Door #17", Dick Walker, Fort Lewis College

"Risk Management Securities Valuation Models", C. G. Mendez, Metropolitan State

"Fractal Mountain: An Application", Tom Kelley, Metropolitan State

"Triadic Dualism", Frederick J. Staley, Front Range Community College

"Use of Mentor Teachers in the College Mathematics Classrooms", Chuck Mc Nerney,
University of Northern Colorado

"The Contract Bridge Scheduling Problem", Joe Rabb (and students), Metropolitan State

Student papers. "Music Mod N: Reflections on Number Theory in Music", John Starrett, Metropolitan
State College

"Return Match: Newton-Berkley Debate (Fractals - Newton's Demise and Berkley's
Vindication?)" Susan Clinkenbeard, Alice Cusak, John Starrett, Metropolitan State

"Dihedral Perfect Numbers", Jeanette M. Fulmer, US Airforce Academy

"Optimizing Computing Programming Problems", Karl Castleton, Mesa State College

"Calculating the Mandelbrot Set Efficiently", Daniel Carroll, Mesa State College

"Integrating Technology into College Math Courses", Guy Westhoff, U. of Northern Colo.

"Using *Mathematica* to Illustrate the Dirichlet Problem for a Cardoid", Brian Eagler,
Univ. of Colorado, Colorado Springs

"On the Expressions of Hyperreal Systems", Minghao Lee, Univ. of Northern Colo.

"Statistical Testing of Random Number Generators", Peter Morris, South Dakota
School of Mines and Technology

"Fast Ellipses on the Computer", David Beazley, Fort Lewis College

"Groebner Bases and the Buckberger Theorem", James Olsen, Colo. State Univ.

"A Chaotic Connection: The Behavior of Newton's Method on a Function with no Real
Roots", Miles Porter, Univ. of Northern Colorado.

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

Minutes of Annual Business Meeting, Rocky Mountain Section, MAA, April 13, 1991

Chair Gail Gliner convened the meeting at 8:30 at the Univ. of Northern Colorado.

Treasurer Bill Ramaley presented a summary of the finances of the section. At the time of the meeting, the section had approximately \$3100 in savings and \$800 in a checking account with about \$400 in known debts and expenses incurred in connection with the ongoing meeting as yet unquantified.

The next meeting was announced to be held at Colorado College in Colorado Springs on April 10 and 11 in 1992.

Duane Porter was nominated for the MAA Certificate for Meritorious Service.

R. Rebecca Struik, Univ. of Colo. Boulder, wished the record to show the Univ. of Northern Colorado is on the censure list maintained by the AAUP.

Corinne Brase, Arapahoe Community College, pointed out that both NCTM and MAA were now recommending 9 hours of content courses in undergraduate mathematics for teachers of elementary education.

Upon discussion, Gale Nash, Western State College, moved the section endorse the NCTM standards since these do specify content. This motion was seconded and unanimously passed with the instruction to the Chair that an appropriate letter be drafted and sent to the Colorado Department of Education.

Gary Grefsrud, Fort Lewis College, reported on the work of the Prognostic/Diagnostic Committee. There was a start of using the prognostic test in a few schools this past year and there is a steering committee attempting to locate sources of funding. Grefsrud moved the MAA, Rocky Mountain Section, write a letter of support on behalf of Colorado JUMP (Junior Mathematics Prognostic). This motion passed unanimously.

The Nominating Committee put forth the names of Gary Grefsrud, Gale Nash, and Karen Whitehead for the position of Chairperson-Elect. After a vote, Gale Nash and Karen Whitehead urged the members present vote unanimously in favor of Gary Grefsrud. It was so done.

Deborah Haimo, President of the MAA and our invited speaker at the meeting, spoke of the forthcoming "Outstanding College Teaching Award." It is expected that this new program will honor 7 teachers in its first year and then 3 teachers a year thereafter. Each of the 29 sections will nominate one person each year and there will also be nominees put forward by other people or groups. At present it is expected that at least 2 of the 3 awardees will be candidates nominated by the section.

The first round of national winners will be announced in January, 1993, at the Joint AMS-MAA meeting in San Antonio

In closing the meeting, the Section voted to thank the University of Northern Colorado for its kind hospitality at these meetings.

Respectively submitted,

William C. Ramaley, Secretary/Treasurer

Minutes of Executive Council Meeting and the Annual Business Meeting, Rocky Mountain Section of the MAA. April 13, 1991

Executive Council minutes.

Gail Gliner convened the meeting of the Executive Council at Denny's Restaurant at 7:30 am. Also present was Bill Ramaley, Corinne Brase, Laurel Rodgers, Dave Roeder, Bill Bosch, Don Elliott, Jack Hodges.

Bill Ramaley gave the summary of the treasurer's report, showing the section had approximately \$953.25 in Checking and \$3,104.63 in savings (including \$1000 as a Short Course reserve fund.) Known outstanding debts were approximately \$400, with an additional unknown amount at UNC in connection with the ongoing meeting.

The Univ. of Northern Colorado Conference Center had handled all the details of mailing out the meetings announcements and the on-site registration for a cost of \$8.90 per registrant. Since the meeting registration fee was only \$5, there was a significant cost incurred in having the Conference Center doing the actual registration. Postage at UNC was \$288 and copying costs were \$238. The expenses for dinner were estimated to equal income.

Five publishers had each paid \$35 for an exhibitor fee and this was to pay for the wine/cheese reception preceding dinner. There were doughnuts and coffee Friday afternoon and Saturday morning; these to be paid out of meeting income.

In summary, costs at UNC were estimated to be \$1500, with registration bringing in approximately \$500, leaving \$1000 to be met in another manner.

The College of Arts and Sciences at UNC generously had offered \$800. Bill Bosch and Don Elliott asked what funds could be supplied to UNC to help with the meeting costs. The Executive Committee suggested Bill and Don first reapproach the Vice Dean at UNC, since the Conference had charged so much for handling the registration. However, the Committee agreed that the Section would remit up to \$200 if necessary. Further expenditure would require further discussion by the Executive Committee.

Dave Roeder, representing Colorado College, extended the Section an invitation to have the 1992 meeting at his college. After discussion, the dates of April 10 and 11 were chosen.

The Committee chose to recommend A. Duane Porter of the University of Wyoming as the recipient of the MAA Certificate of Meritorious Service. There needs to be written a citation of approximately 300 words in length, which includes a short biography and a statement about the recipient's contributions to the MAA. Preparing this fell to Bill Ramaley, as Secretary of the section.

The Executive Committee adjourned at 8:25

Respectively submitted,

William C. Ramaley, Secretary/Treasurer, Rocky Mountain Section MAA