



MINI-FOCUS

Issue 20

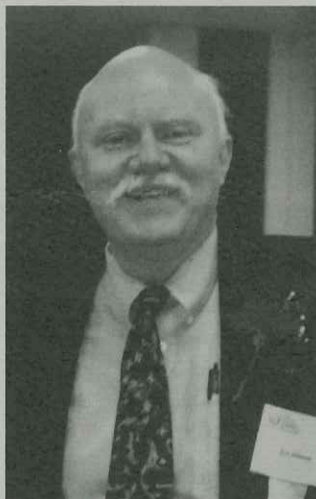
JANUARY 1995

THE NEWSLETTER OF THE NORTHERN CALIFORNIA SECTION, MAA

Onward and Upward

Colorado beckons, and the fellow is agreeable. So, **Ken Rebman**, erstwhile stalwart of the Northern California Section, has taken off to the heights of the Rockies to assume the post of Vice Chancellor, Academic Affairs, for the University of Colorado at Colorado Springs.

The former Dean of California State University at Hayward received his Ph.D. from Ann Arbor in 1969 with a thesis on linear and nonlinear programming, but he shifted his research interest to combinatorics. The shifty professor was Chair of the Department of Mathematics from 1979 to 1985. His major accomplishment during that period was to establish a B.S. in Computer Science. He was Chair of the Academic Senate in 1986-87 and Dean of the School of Science from 1987 to 1994. Not to be deprived in athletics, he was an internationally certified volleyball referee, and was head of the volleyball referees at the 1984 Olympics in Los Angeles. For those of us whose attention is centered on the activities of the Northern California Section, during the interval of 1974-76, he served as the Section's Vice Chair, Chair and Program Chair. He was Governor for the Section from 1979 to 1981.



Spring, MD; Noam M. Shazeer, Swampscott, MA; Stephen S. Wang, Aurora, IL; Jonathan Weinstein, Lexington, MA.



Pictured left to right: Jacob Lurie, Stephen Wang (one shared Adidas), Naom Shazeer (other Adidas), Dr. Walter E. Mientka, Jeremy Bem, Jonathon Weinstein, Aleksandr Khazanov

The team not only defeated 68 countries in the competition, but also, for the first time in the 35 year history of the examination, each of the students wrote a perfect paper. A major New York paper carried the account under the banner, "World Math Shocker - U.S. Students Win", that was copied by many of the nation's newspapers. Unfortunately, this kind of headline apparently connotes a disbelief in the education of U.S. students, or worse, in their actual mathematical ability. Do we really believe that an American youngster can only become a celebrated athlete but has straw for brains?

Since our initial participation in 1974, the USA has seldom been below third place, and still more rarely, below fifth place in the competitions—in full justification of Walter Mientka's 1972 proposal for entering. From its entry in the Olympiads, the American team has never been without a medalist on its team; only once did it not have at least one gold medalist, and on that year (1988), it captured five silver and one bronze.

On matters with regard to competitions, the editor reports with sadness the passing of one of the most energetic individuals for such events, Professor Peter O'Halloran, President of the World Federation of National Mathematics Competitions. He died peacefully in his sleep on September 25, 1994. During his last month of illness with cancer at home,

International Mathematical Olympiad

The 35th International Mathematical Olympiad (IMO) was held this year on July 8 - 20, 1994 in Hong Kong. The top teams and their respective scores are:

1st place — USA (252)	
2nd place — PRC (229)	3rd place — Russia (224)
4th place — Bulgaria (223)	5th place — Hungary (221)

The members of the USA team were: Jeremy Bem, Ithaca, NY; Aleksandr L. Khazanov, New York, NY; Jacob Lurie, Silver

he was awarded the David Hilbert Award, and he had also just been awarded the World Cultural Council's "José Vasconcelos" World Award for Education at a special ceremony at Chambéry, France.

Northern California Section Meetings

Inasmuch as attendance at the annual section meeting in February usually drops whenever the joint AMS and MAA meetings are held in San Francisco, the officers of the Section have decided to cancel the annual section meeting in 1995, scheduling a short business meeting in San Francisco instead. At the invitation of the Southern California Section, the two sections will hold a combined meeting in San Luis Obispo from 8:00 p.m., October 20, 1995 (Friday) to noon, October 22 (Sunday). A north-south joint newsletter will be issued possibly in May with announcements and registration procedures for members interested in attending this meeting. Speakers who have agreed to be on hand include: **Don Albers**, MAA Associate Director; **Tom Apostol**, Cal Tech (luncheon); **Judith V. Grabiner**, Pitzer College; **Ron Graham**, AMS president; and **Bill Thurston**, MSRI Director. At the meeting there will be contributed papers and Student Poster Sessions as well as a panel discussion on evaluating innovations.

Jane Day Wins Sectional Teaching Award

On February 12, 1994, at the San Jose City College meeting of the Northern California Section, **Jane Day** of San Jose State University was awarded the Section's third Award for Distinguished College or University Teaching of Mathematics.



"There is testimony from students and from colleagues around the country that Professor Day 'epitomizes the professor we'd all like to be in the classroom.' In a long career marked by the intertwining of research and teaching, she consistently teaches highest quality mathematics in a highest quality way, unfailingly giving abundant help and encouragement to all

students interested in doing their best in mathematics.

Active in national curriculum and workshop activities, Jane Day has been a prime mover in local and regional mathematical programs as well, with special interests in linear algebra. She became a principal architect of a new major in applied mathematics in her department. She established the Math Clinic at San Jose State University which undertakes mathematical projects in which students, under professorial guidance, attack a variety of problems brought to the clinic by the leading local industries of the Silicon Valley. Jane has been the invited speaker at SIAM conferences and, of course, she is nowadays a leader in the introduction of the benefits of MATLAB. She is helping to modernize the teaching of linear algebra throughout the country, to the benefit of future engineers, scientists, business leaders and mathematicians."

MINI-FOCUS

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Editor: William G. Chinn

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Executive Committee of the Section

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Women and Mathematics: **Deann J. Christianson**, University of the Pacific

High School Contest: **Terry Shell**, Santa Rosa Jr. C

Members of the Northern California Section Who Are National Officers, Committee Members, or Members of Editorial Boards

Henry L. Alder, UC Davis — Invest Com, Coord Council on Awards, Com on Awards for Col & Univ Teaching

G. L. Alexanderson, Santa Clara U — Secretary, Executive Committee, Finance Committee, Committee on Committees, Long Range Planning Committee, Committee on AMS-MAA Cooperation, Committee on Bylaws, AMS-MAA-SIAM Administrative Committee, Committee on the Putnam Prize Competition, Committee on the MAA 25-Year Banquet, Newsletter Editorial Subcommittee, Com on Personnel, Math Horiz Adv Bd

Janice Blasberg, San Jose — Adv Panel on Amer Math Comps

Steven Blasberg, West Valley C — Adv Panel on Amer Math Comps

C. Stewart Brewster, Coord Council on Pblns

Jean B. Chan, Sonoma State U — Development Com, Membership Committee, Committee on Visiting Lecturers, Prog Com for SF Mtgs, LAC SF Mtgs

William G. Chinn, retired — Subcom on Quantitative Literacy Requirements, CTYC, LAC SF Mtgs (chair)

Allan B. Cruse, USF — LAC SF Mtgs

Jane M. Day, San Jose State — Serv Courses

Keith J. Devlin, Com on Pblns, Newsltr Edit Subcom (Chair), AMS-MAA-AAAS Liaison Com

Hugh M. Edgar, SJSU — Spectrum Edit Bd

Wade Ellis, Jr., West Valley College — Com on Testing, COMET, CUPM, Serv Courses, Com on Minicourses

Newman Fisher, SF State U — LAC SF Mtgs

Martin E. Flashman, Humboldt State U — CRAFTY

Paul R. Halmos, Santa Clara U — Associate Editor, American Mathematical Monthly
 Edward M. Harris, C San Mateo — NML Edit Bd
 Leon Henkin, UC Berkeley — Com on Gung/Hu Award Distinguished Serv to Math, Com on Participation of Women, Com Oppr Math for Underrep Minorities, Prog Com for SF Mtgs
 Alice J. Kelly, Santa Clara U — Coord Counc on Mtgs
 Leonard F. Klosinski, Santa Clara U — Coordinating Council on Competitions, Committee on the Putnam Prize Competition, Math Horiz Adv Bd, Dir Putnam Competition
 Roland H. Lamberson, Humboldt State U — Committee on Math & the Envi
 Lester H. Lange, Moss Landg Mar Labs — Com on Earle Hedrick Lectures, Spectrum Edit Subcom
 Millianne Lehmann, USF — LAC SF Mtgs
 Hendrik W. Lenstra, Jr., UCB — Subcom on Summer Courses
 John A. Mitchem, San Jose State U — Prog Com for SF Mtgs
 Calvin C. Moore, UC Berkeley — CTUM
 Tristan Needham, USF — LAC SF Mtgs
 Ingram Olkin, Stanford U — Committee on Math & the Envir
 Peter S. Pacheco, USF — LAC SF Mtgs
 Bjorn Poonen, UC Berkeley — Advisory Panel of the Committee on American Mathematics Competitions
 Kenneth Rebman, erstwhile CSU Hayward — Prog Com for SF Mtgs (Chair)
 Alan H. Schoenfeld, UC Berkeley — Committee on Awards for College and University Teaching, AMS Committee on Research in Undergraduate Mathematics Education
 Franklin F. Sheehan, SF State U — LAC SF Mtgs
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 Evelyn Silvia, UC Davis — Com on Women in Math Sci
 Alfred S. Y. Tang, SF State U — LAC SF Mtgs
 Hwa Tsang Tang, CSU Hayward — LAC SF Mtgs
 William P. Thurston, MSRI — Coord Counc on Competns, Com on Faculty Developmt
 Donald D. Weddington, San Jose State U — Committee on Consultants
 Maurice D. Weir, Naval Postgraduate School — LAC SF Mtgs
 Carroll O. Wilde, Naval Postgraduate School (rtd) — Committee on Mathematics and the Environment
 Eileen T. Wu, Menlo C — Devel Com, Com on Sectns, LAC SF Mtgs
 Paul Zeitz, U San Francisco — Advisory Panel of the Committee on American Mathematics Competitions

NEW Chairs

UC Davis — **Craig A. Tracy**
 CSU Hayward — **Edward L. Keller**
 Mills College — **Steven Givant**
 University of Nevada Reno — **Jerry Johnson**
 CSU Sacramento — **Edward Bradley**
 CSU Stanislaus — **Louis A. Feldman**
 West Valley College — **Edward A. Lodi**

Welcome Wagon

Along with the downsizing that has been looming in the industries, including learning institutes, it is refreshing to welcome some new faces just across the stateline in Reno.

Ed Keppelmann, who got his Ph.D. in 1991 from the University of Wisconsin under Ed Fadell came to Reno by way of the Lone Star State, at Texas A & M as visiting assistant professor. He's in his second year as assistant professor at UNR, an algebraic topologist working on the Nielsen fixed point theory of solvmanifolds. He is concerned about the future of math education in both California and Nevada and is excited by the latest prospects for the use of technology in his teaching. He is the MAA representative for UNR. He recognizes the large shoes he had to fill for Maurice Beesley, and we welcome his humility.

Jeff McGough is one of two neophytes this year. He received his Ph.D. in 1993 from the University of Utah under the direction of Prof. Klaus Schmidt; he spent one year as a postdoc under Prof. Hans Othmer at the same location. His research area is in bifurcation theory and elliptic partial differential equations. He is specifically interested in the combination of variational and numerical techniques to address questions in nonlinear analysis.

Swatee Naik received her Ph.D. in May 1994 from Indiana University under the guidance of Dr. Charles Livingston. Her research is in the area of geometric topology, in particular, knot theory. Swatee is very interested in both teaching and research, and in the various education reforms related to the teaching of mathematics, including the use of technology in the classroom.

Additional Welcome

Here, we need to catch up on someone who joined this Section as an administrator. **Keith J. Devlin** is Academic Dean of the School of Science at St. Mary's College. He is also Senior Researcher at the Center for the Study of Language and Information at Stanford and a Consulting (Research) Professor in the Department of Information Science at the University of Pittsburgh. Born in Hull, England, he got his B.Sc. degree in mathematics at King's College in '65, and his Ph.D. in mathematics at the University of Bristol in 1971.

He has held faculty positions at the Universities of Manchester, Lancaster, and Aberdeen in Britain, Heidelberg and Bonn in Germany, Oslo in Norway, Toronto in Canada, and Penn State, Colorado at Boulder, Stanford, and Colby College in the States. A specialist in mathematical logic, since the mid-1980's he has been investigating fundamental issues involved in information processing and communication, both for mind and machine. Mini-Focus regrets the lack of space to cite many of his interesting books and articles.

Mini-Focus Laments the Passing of Two from UCD

Professor **Hubert A. Arnold** died on October 20, 1994, at the age of 82. He was born in Chicago and received his A.B. from the University of Nebraska, Lincoln, in 1933. He studied at the University of Paris (Sorbonne) and received his Ph.D. in mathematics from the California Institute of Technology in 1939. He was an instructor in mathematics at the University of Minnesota, 1939-40, a visiting Research Scholar at the University of Virginia, 1940-41, and an instructor and assistant to Professor Lefschetz at Princeton, 1941-42. He served in the United States Navy from June 1942 to May 1946, entering as Lieutenant, j.g., and leaving as Lieutenant Commander. His research interests in mathematics included differentials in abstract spaces and the topological structure of limit sets. He was a speaker at meetings of the Northern California Section in 1950, 1956, and 1957. While at Cal



Tech, he was a steady visitor at E. T. Bell's house and supplied a considerable amount of information to Constance Reid for her book: *The Search for E. T. Bell*, published by the MAA.

Professor **Albert C. Burdette** died on May 27, 1994, at the age of 89. He joined the Mathematics Department of UC Davis as one of the earliest members in 1936 after receiving his Ph.D. the same year from the University of Illinois. He was a highly regarded teacher and wrote two widely used texts for lower division mathematics courses; perhaps the most well-known was *An Introduction to Analytic Geometry and Calculus*. He was a speaker at the third meeting of the Northern California Section of the MAA on January 25, 1941, at San Francisco Junior College. He retired in 1971.



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