PRIME BITS brings news of current activities and events in the life of the Mathematics Department at Boulder to alumni and friends. Please send news items for inclusion to PRIME BITS (editor, W.B. Jones). We plan to publish two issues per year (spring and fall). Enclosed is a questionnaire to return if you wish to remain on our mailing list to receive future issues.

NEW HOME FOR MATHEMATICS DEPT.

Ground breaking is expected to begin in February 1991 for a new building to house the Mathematics Department and Engineering Library. The building is to be located on the west side of the Engineering Center and will include a 400-seat auditorium and facilities for the Math Module Program. The space shortage in the Engineering Center has become acute in recent years. The new building, which has been in design and planning stages for three years, will provide much needed new space. See photograph of architect's model on page 2.

MATHEMATICS MODULE PROGRAM (MMP)

In Fall 1989 the Mathematics Department initiated a self-paced program for teaching college algebra, trigonometry and mathematics for business and social science students. The various topics are taught in eleven courses of 1-semester-credit-hour each, and the program is called The Math Module Program (MMP). Students in the MMP are provided with conventional lectures (for those who wish to proceed at the usual pace), a tutoring center, a video center with tapes available for each topic, and textbooks and course guides. A testing center is provided so that students can be tested when they are ready. The MMP was organized and has been directed by Professor David Rearick. Much assistance in the planning was given by the Mathematics Department at Colorado State University (Fort Collins). We are particularly grateful to the Head of their Math Department, Professor Robert Gaines, and to the Co-Directors of their MMP, Ken Klingenstein and Lois Samer, for their cooperation and guidance. Perhaps the most valuable help we obtained from CSU was the Assistant Director of their MMP, Laurie Feehan, who is now the Associate Director of our MMP and will become its Director in January 1991.

UNIVERSITY MATHEMATICS PROGRAM (UMAP)

In Fall 1990 Dean Charles R. Middleton, College of Arts and Sciences, established a new administrative unit called the University Mathematics Program with responsibility for the teaching of the Math Module Program and courses on the "Spirit and Uses of Mathematics" and "QRMS" (Quantitative Reasoning and Mathematical Skills). All of these courses can be used to fulfill a newly adopted A & S requirement in QRMS. Professor John H. Hodges of the Mathematics Department is the Director of UMAP.

PROGRAM FOR APPLIED MATHEMATICS (PAM)

The fall of 1989 also saw the beginning of the Program for Applied Mathematics, a new unit formed in the College of Arts and Sciences to
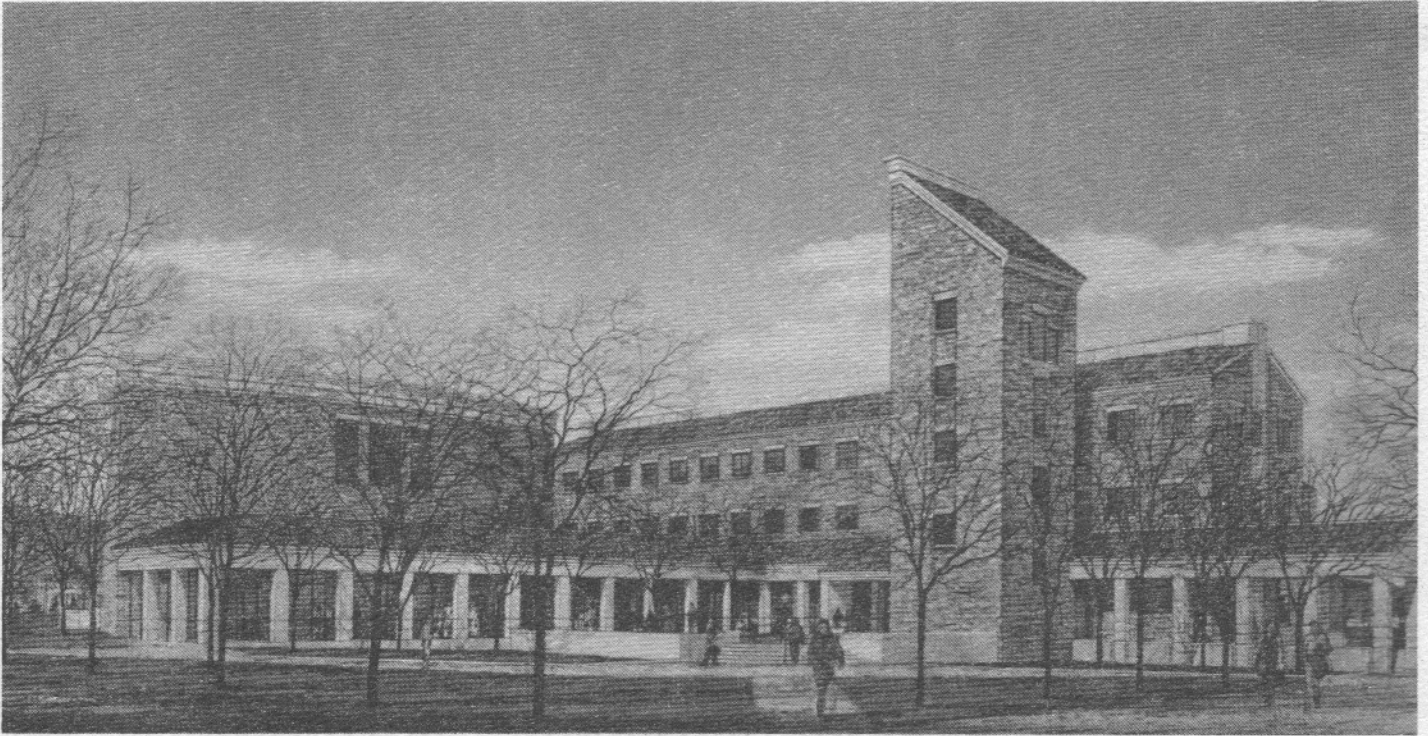
MATHEMATICS BUILDING
WITH GEMMILL ENGINEERING LIBRARY

Mathematics Building with Gemmill Engineering Library. This photograph of the architect's model shows the future home for the Mathematics Department. Construction is expected to begin in February, 1991. The hoped for completion date is summer 1992. The new building will be located directly to the west of the Engineering Center.

enhance teaching and research in applied mathematics. The Director of PAM is internationally known applied mathematician, Professor Mark Ablowitz, who comes to UCB from Clarkson University in Potsdam, NY. In addition to obtaining a number of new faculty positions, PAM has also received four faculty members who have transferred from the Department of Mathematics: Professors Jerrold Bebernes, James Curry, Robert Easton and John Maybee.

ULAM CHAIR VISITING PROFESSOR

Professor Richard McGehee from the University of Minnesota is the Ulam Chair Visiting Professor for 1990–91. He is lecturing on Dynamical Systems.

DE LONG LECTURES FOR 1990–91

Professor Kenneth A. Ribet of the University of California, Berkeley, will give the De Long lectures during the week April 2–5, 1991. An eminent number theorist, Professor Ribet was co-recipient of the Fermat Prize for Research on Mathematics in 1989 for his "contribution to number theory and to Fermat's last theorem." He will speak on various topics in number theory.

NEW APPOINTMENTS AT UCB

Professor Arlan Ramsay assumed the duties of Chair of the Department in July 1990.

We are very pleased to announce the following new faculty who recently joined the Mathematics Department:

Jeffrey Fox arrived in August 1988 with a Ph.D. from the University of California, Berkeley (1983). He was a Research Assistant Professor at Purdue University (1983–85), and Assistant Professor at Louisiana State University (1985–88) and a member of M.S.R.I. Berkeley (1987–88) before coming to Boulder. During 1990–91 Jeff is on leave at SUNY, Albany, NY.

David R. Grant's appointment began in 1988, but AY 1988–89 was spent as a visiting professor at Cambridge University, U.K. Prior to that David took a Ph.D. from M.I.T. (1985) and then was a T.H. Hildebrandt Research Assistant Professor at the University of Michigan for three years. His interest is in algebraic number theory, especially the arithmetic of curves. This includes questions about the structure of solutions to polynomial equations defined over the rational numbers. David enjoys playing bridge and claims a tendency to be an "insane baseball fan."

Judith A. Packer came to UCB in fall 1989. Before that she received a Ph.D. from Harvard University (1982) and has subsequently taught at National University of Singapore (1983–89) and has been a member of M.S.R.I. Berkeley (1982–83), the Institute for Advanced Study (Princeton, spring 1987) and visiting fellow at the U. New South Wales (Sydney, Australia, November 1986) and Centre for Math Analysis, Australian National U. (November 1987). Mathematical interests include operator algebras: K-theory of C*-algebras, C*-algebras and W*-algebras associated with dynamical systems, operator algebras associated with projective representations of locally compact groups. Judy enjoys swimming, listening to music and watching old movies. She is married to James Jesudason, a sociologist who is presently working at the Colorado School of Mines.

Eric Stade arrived in Boulder in summer 1990 after completing a Ph.D. degree at Columbia University (1988) and spending two years (1988–90) as a John Wesley Young Research Instructor at Dartmouth College. His primary mathematical interests are analytic number theory and automorphic forms, particularly the application to these topics of the theory of special functions. Eric's hobbies include playing the drums and reading huge numbers of mysteries and police novels.

Lynne H. Walling joined the UCB faculty in fall 1990. Her Ph.D. is from Dartmouth College (1987) and she has taught at St. Olaf and Bates Colleges before coming to Boulder.

Lynne works in number theory, with primary interest in using modular forms to find arithmetic relations on the representation numbers of quadratic forms. Her hobbies include making micro machine jewelry and sometimes making dinner. She also enjoys cross-country skiing, leisurely hiking and reading mysteries.

OFFICE STAFF UPDATE

Barbara Miller became the new Secretary for the Graduate Program in summer 1990 after filling a similar position in the Kinesiology Department. She replaces a long-time member of our staff, **Betty Jo Thorson**, who moved to the History Department last summer. **Margaret Jones** joined the department as Staff Assistant in April 1989. **Wanda Knopinski** (undergraduate secretary) and **Liz Stimmel** (technical typist) continue to be part of the office staff.

SPOTLIGHTS

John H. Hodges (Professor) received the Boulder Faculty Assembly Teaching Excellence Award in spring 1990. The award includes $2000 in cash and $1000 for teaching activities. In September Hodges traveled to Cortez, Colorado to give a series of talks on mathematics to students and the general public. He spoke to students at Cortez Junior and Senior High Schools and Mancos Senior High, and gave a public lecture at the CU–Cortez Center on "How Does a Mathematician Do Research?".

Wolfgang Schmidt was named Distinguished Professor of Mathematics by the Board of Regents in spring 1988 in recognition of extraordinary achievements in research, teaching and service. In September 1990 he presented the main address at the German Mathematical Society (DMV) Hundredth Annual Meeting in Bremen, Germany. Professor Schmidt is on leave with a Faculty Fellowship in AY 1990–91, dividing his time between Berkeley and Europe.

R.D. Richtmyer, Professor Emeritus, was one of three recipients of the Leroy P. Steele Prizes at the ninety-third summer meeting of the American Mathematical Society held in Columbus, Ohio this summer. Richtmyer's award recognized his book *Difference Methods for Initial Value Problems*, Interscience, first edition, 1957; second edition (with K. Morton), 1967. Richtmyer's book has been the most influential book in the development of numerical methods for solving partial differential equations, and has been widely used and studied for more than 30 years since its first appearance, and is still widely used now. **This is a remarkable record in a field that has changed radically over that period of time!** The book has been an indispensable part of the library of all numerical analysts and all applied mathematicians interested in computation for over 30 years and will remain so for a long time to come.

Karl Gustafson (Professor) gave invited lectures in Yugoslavia and Spain in June, 1990. His address at the XI Sitges Conference on Statistical Physics was entitled "Reversibility in Neural Processing Systems." His address at the 4th International Workshop in Analysis in Dubrovnik was entitled "Antieigenvalues in Analysis." Professor Gustafson was the principal lecturer at a Conference on Differential Equations in Cali, Colombia in August 1990. The conference was part of the 45-year celebration of the founding of the University of Valle in Colombia. Gustafson was presented the Rector's Award for distinguished service at the close of the conference.

Professor Gustafson chaired the 1st IMACS International Conference on Computational Physics in Boulder, June 11–15, 1990. Approximately 100 invited talks were given, representing some of the most intensive scientific supercomputer use in the world. It was estimated that on the order of $100,000,000.00 of supercomputing budget came to this conference. Among the speakers were physicists, mathematicians and engineers from NASA, Los Alamos, McDonnell Douglas and other organizations and universities deeply involved in the new supercomputing technology. Professor Gustafson has received two grants of 250 Cray-2 hours from the Nu-

merical Aerodynamical Simulation Program at NASA, Ames Research Center. These resources, valued at approximately $500,000, will be used by Gustafson and co-investigator Robert Leben of the Colorado Center for Astrodynamic Research at Boulder, co-workers and students to study the vortex dynamics of aerodynamic flows. Gustafson is also part of a team that won a $15 million 5-year grant from the National Science Foundation for research in Optoelectronics Computing Systems.

Jan Mycielski (Professor) received the Wraclaw Sierpinski Medal in Warsaw, Poland in June 1990. The award, given by the Polish Mathematical Society and the University of Warsaw, was in appreciation of his work in foundations of mathematics, game theory and algebra. In Poland, Mycielski gave a lecture to the Society citing the work of Sierpinski as an influence on his work. Mycielski was also one of two members of the UCB faculty to be named a Research Lecturer for 1989–90.

J. Donald Monk (Professor) was honored on the occasion of his 60th birthday at a conference organized by his students and colleagues at the UCB campus, May 29–31, 1990. The conference was attended by 50 mathematicians representing 7 countries.

Jerrold Bebernes (Professor) recently published a monograph, *Mathematical Problems from Combustion Theory* (jointly with David Eberly) in the Applied Mathematics Series, Vol. 83, Springer–Verlag (November 1989). Jerry recently presented invited lectures at the University of West Virginia, University of Waterloo, Canada, the Asian Mathematical Congress in Hong Kong, Fedan University in Shanghai and Academica Senica in Beijing, P.R. China. Somewhat earlier Jerry and David Kassoy were co-hosts and organizers of the Sixth Army Conference on Applied Mathematics, sponsored by the Army Mathematics Steering Committee. Held at the University of Colorado, Boulder, in Spring 1988, the conference was attended by 125 mathematicians.

David Wilson (B.A. in Math, 1990) became the first CU Rhodes Scholar since 1981. David was one of 32 American students chosen for a two-year scholarship at Oxford University. He is presently studying both mathematics and philosophy at Oxford. At CU he wrote a senior thesis entitled "The End of the Nuclear Age: Searching for Long-term Solutions for Dealing with Radioactive Waste." He plans to continue working on disarmament issues in England.

FACULTY RETIREMENT

Members of the mathematics faculty who retired in recent years and (years at UCB) are: William E. Briggs (1955–1988, Dean of the College of Arts and Sciences for 17 years), Robert W. Ellingwood (1952–1988), Irving Weiss (1962–1989) and Burnett Meyer (1957–1990).

MATHEMATICS FACULTY LOSSES

Those of you who were here at UCB in earlier years will remember two long-term members of the faculty whose deaths occurred recently.

Frances Pauline Stribic died March 13, 1989 at the age of 88. She taught mathematics at the University of Colorado, Boulder for 38 years from 1926 until her retirement in 1965.

Aboul Zirakzadeh died February 11, 1990 at the age of 67. He was a member of the Mathematics Department for 28 years from 1956 until his retirement in 1985.

MATHEMATICS DEPARTMENT
1990–91 ANNUAL FUND

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We appreciate your support.

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CU degree(s) and date(s) _____

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Major Professor _____

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Present position, employer, location _____

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Awards, honors, fellowships _____

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