

COURANT, WALSH, McQUEEN AND RICE RECEIVE NEW APS PRIZES

The American Physical Society last year presented the first Robert R. Wilson Prize in Accelerator Physics to Ernest D. Courant (Brookhaven National Laboratory). The Wilson Prize was established by the society's division of particles and fields, the Topical Group on Particle Beam Physics and friends of Wilson to recognize and encourage outstanding achievement in the physics of particle accelerators; it consists of a certificate and \$5000.

Courant was cited for "his key role in the invention of the principle of alternating-gradient focusing, and his pioneering work in particle beam dynamics." His primary research interest since joining Brookhaven in 1947 has been accelerator physics. His initial research was on the theory of particle beam growth and losses in beam intensity. At the suggestion of Stanley Livingston, he later began studies on beam focusing techniques that culminated in the invention of alternating-gradient focusing. (See *PHYSICS TODAY*, June 1987, page 83.)

Courant, now a senior physicist at Brookhaven, received his MS (1942)

and PhD (1943) from the University of Rochester. He has taught at the University of Cambridge, Yale University and Princeton University, as well as the State University of New York at Stony Brook.

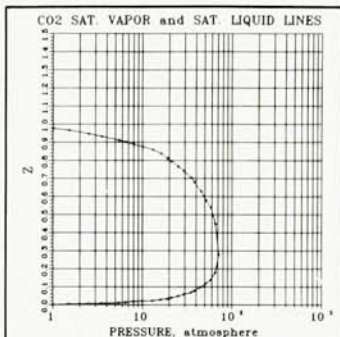
The society's Topical Group on Shock Compression of Condensed Matter Physics presented the first Shock Compression Award to John M. Walsh and Robert G. McQueen of Los Alamos National Laboratory and Melvin H. Rice of S-Cubed (La Jolla, California), a division of Maxwell Labs, in recognition of their "pioneering contributions in the use of shock waves to determine high-pressure equations of state for condensed matter." The biennial award was established by friends of the APS Topical Group on Shock Compression of Condensed Matter Physics to recognize contributions to understanding condensed matter and nonlinear physics through shock compression; it consists of a plaque and \$2000.

In the 1950s Walsh, McQueen and Rice conducted seminal studies at Los Alamos on the shock-wave compression of dozens of metals, minerals,

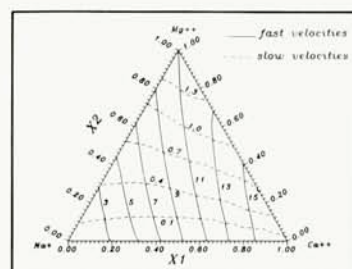
Melvin H. Rice, John M. Walsh and Robert G. McQueen



SCIENTIFIC GRAPHICS



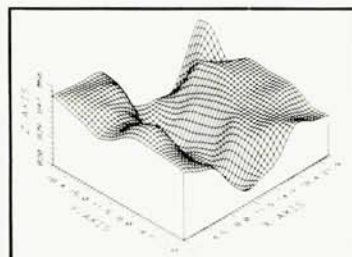
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Ernest D. Courant

rocks and fluids. The data they obtained and the experimental methods they developed remain fundamental to current investigations.

Walsh was educated at the University of Texas, Austin, and completed his BS in 1947 and his PhD in 1950. He worked in group GMX-6 (which later became the shock-wave physics group) at Los Alamos Scientific Laboratory from 1950 to 1960; he then went to the General Atomic Division of General Dynamics (now GA Technologies). In 1967 he became manager of the continuum mechanics division of Systems, Science and Software (now S-Cubed). Walsh returned to the Los Alamos staff in 1975 as associate division leader of M-Division. In addition, he served as leader of group M-4, which develops explosive-metal systems, in 1977-80.

McQueen received his BA (1948) and MA (1949) in mathematics from the University of Denver. In 1949 he joined the W-4 weapons design group at Los Alamos, where he worked on nuclear weapon designs. In 1955 he transferred to Walsh's group to engage in shock-compression studies. McQueen served as group leader from 1965 to 1975.

Rice received his BS from the South Dakota School of Mines and Technology in 1952. While working in the summers of 1952-54 and in the 1955-56 academic year at Los Alamos with Walsh, he completed his MS (1955) and PhD (1958) at Iowa State University. He then returned full-time to Los Alamos, where he worked in the shock-wave physics group until 1965. From 1966 until 1972 he was an associate professor of physics at the University of South Dakota. Rice went in 1972 to S-Cubed, where he is now a senior scientist.

APS PRESENTS 1987 GOEPPERT-MAYER AWARD TO DOLAN

The American Physical Society last year presented the second Maria Goeppert-Mayer Award to Louise A. Dolan (Rockefeller University) for "her work on the theory of elementary particles, particularly for the identification and study of Kac-Moody algebras and their application to Yang-Mills fields and relativistic string theory." APS established the Goeppert-Mayer Award in 1986 "to recognize and enhance outstanding achievement by a woman physicist in the early years of her career and to provide opportunities for her to present these achievements to others through public lectures." It consists of a \$2000 prize and a \$3000 travel allowance for the recipient to give lectures on her research at four institutions of her choice and at the meeting at which the award is bestowed.

Dolan's early research interests included formulating field theory at finite temperature, the $1/N$ expansion and the quantization of solitons. In 1981 Dolan identified Kac-Moody algebras as a hidden symmetry in Yang-Mills fields; she has since applied these algebras to strong interaction theory, Kaluza-Klein theory and compactified superstring theories.

Dolan holds a BA from Wellesley College (1971) and a PhD from MIT (1976). She was a junior fellow in the Society of Fellows at Harvard University from 1976 until 1979. In 1979 she became a research associate at Rockefeller University; she has since been named assistant professor (1980) and associate professor (1983) there.

Louise A. Dolan

