NOTICES

- In Memoriam: Richard Laver. Richard Laver ("Rich" to those who knew him) died on September 19, 2012 after a several year struggle with Parkinson's disease, in Boulder, Colorado. He was born on October 20, 1942 in Los Angeles, California.

  Rich obtained his Ph.D. in 1969 at the University of California, Berkeley, under the direction of Ralph McKenzie. In his dissertation he solved a problem of Fraïssé, showing that there is no infinite sequence of scattered linear orderings each embeddable in the previous one but none embeddable in the following one. In his proof he used several facts about well- and better- quasi-orderings, Hausdorff's theorem on scattered orderings, and results of Fred Galvin. He developed these ideas in several papers.

  In a 1976 paper Laver settled another long-standing problem, showing that it is consistent that Borel's conjecture holds: no uncountable set has strong measure zero, while the continuum has size $\aleph_2$. He proved this by introducing what is now known as Laver forcing: forcing similar to Sachs forcing, but with trees which have stems, an element of the tree such that all other elements extend it. He used a countable support iteration of this forcing, one of the first uses of such an iteration.

  In a paper of 1978 he contributed to the theory of indestructiblity, showing that there is a forcing extension in which a given supercompact cardinal remains supercompact under certain further extensions. For this purpose he used what is now called a Laver function, and Laver preparation.

  In 1984 he proved an extension of the Halpern-Läuchli theorem to an infinite product of perfect trees.

  Beginning in 1990 Rich studied an algebraic notion deriving from a large cardinal notion. If λ is such that there is a nontrivial elementary embedding j of V_λ into V_λ, then the collection of all such embeddings can be made into a structure $(E_\lambda, *)$ where $*$ is a binary operation on E_λ which satisfies the left distributive law $a * (b * c) = (a * b) * (a * c)$. He studied this structure in a series of papers. Several of the algebraic results were proved under a large cardinal assumption, while some of them were later proved by purely algebraic methods. These considerations gave rise to an interesting finite structure called a Laver table. He showed that there is an operation $*$ on $\{1, \ldots, 2^n\}$ such that $a * 1 \equiv a + 1 \pmod{2^n}$ and the above left distributive law holds.

  Rich had many extra-mathematical interests. He had long been interested in chess. He was on the UC Berkeley winning team of the 1967 US Intercollegiate championship, and had the rank of an International Master. He played competitive bridge. He was an active climber; both pure rock climbing and mountaineering. For example, he climbed the normal route on the Eiger with Don Monk—a memorable trip involving a storm on the descent. He had a droll sense of humor, frequently expressed in word puzzles.

  His premature death leaves a gap in the lives of many people.

- In Memoriam: Mary Ellen Rudin. Mary Ellen Rudin was born December 7, 1924 in Hillsboro, Texas. She died March 18, 2013, peacefully at home, exactly as she wished, in Madison, Wisconsin.

  Mary Ellen got her Ph.D. in 1949 at the University of Texas, Austin under the supervision of R.L. Moore. After teaching at Duke University and the University of Rochester, she and her husband, Walter Rudin, joined the faculty of the University of Wisconsin in 1958. She became a Full Professor in 1970 and Professor Emeritus in 1991.