

**MEMORIAL RESOLUTION OF THE FACULTY
OF THE UNIVERSITY OF WISCONSIN-MADISON**

ON THE DEATH OF PROFESSOR EMERITUS RICHARD E. MEYER

Professor Richard Meyer and his wife Ilse Meyer passed away on Sunday, January 16, 2008. They are survived by their children Michele, Nicole, and Peter; grandson Max; as well as Richard's brother Ludwig and Ilse's sister, Eva; son-in-law Bruce and daughter-in-law, Eva.

Richard was born March 23, 1919 in Berlin, Germany and was educated at the College Francais (Berlin) and the Swiss Federal Institute of Technology (ETH) where he received, respectively, the degrees of Dipl.Mech.Engr. in 1942 and Dr.Sc.Technology, Aero. Eng. in 1946. His first appointment was junior scientific officer, British Ministry of Aircraft Production, 1945-46, which was followed by assistant lecturer in applied mathematics, University of Manchester, 1946-47; I.C.I. Research Fellow, University of Manchester, 1947-52; senior lecturer in aeronautical engineering, Sydney University, 1953-56; reader, University of Sydney, 1956-57; associate and full professor of applied mathematics, Brown University, 1957-1964; professor of mathematics, University of Wisconsin-Madison, 1964-1994; and professor emeritus after 1994. In addition Richard was a member of the Australian Academy of Sciences and had held visiting appointments in the U.S., Israel, U.K., and Australia.

Richard's early work was on turbine aerodynamics which began his sustained interest in supersonic aerodynamics, gas dynamics, and the theory of characteristics, to which he made many contributions. In Australia, he became responsible for a supersonic laboratory and organized an integrated, experimental and theoretical research team; conversely, he found himself involved in studies of the relation between theory and experiment in modern continuum mechanics.

At Brown, he turned to mathematical problems in nonlinear hyperbolic and singular partial differential equations arising from gas dynamics. He also undertook studies on the nonlinear long-wave theory of waves on beaches, which culminated in the discovery of the mechanism that converts waves into run-up and back-wash on the foreshore.

His interest in the mathematical theory of water waves continued with studies of fundamental hydraulics and, in alliance with M.C. Shen and J.B. Keller, of wave refraction and resonance offshore, in which short-wave asymptotics has been used and extended to obtain notable advances in the three-dimensional theory of classical water waves with applications to the coastal and shelf oceanography.

At Wisconsin, he contributed to the interdepartmental research program in plasma physics with studies in collisionless plasma shock structure and an elucidation of adiabatic invariance. In turn these questions involved him in a series of mathematical researches, first on modern asymptotics and then on classical asymptotics and exponential precision. These advances led him into reforms and extensions of turning point theory and short-wave (WKB and ray) asymptotics. In his later years his interests broadened to included quantum scattering, meteorology, and ecological fluid mechanics.

Apart from his research papers he wrote a number of books, encyclopedic articles and reviews to offer access to recent advances in his specialties to a wider scientific audience.

Richard had a vigorous non-mathematical life as well. His accomplishments as a mountaineer have recently by recounted in an article by his daughter Michele in the United Airlines Hemispheres magazine, June 2007.

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Richard was one of a kind, a rugged individualist who marched to no one's drum but his own. He will be missed by all his friends and colleagues at UW.

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