

THE UNIVERSITY OF MICHIGAN

*Regents Communication*

**ACTION REQUEST**

**Subject: Report of Faculty Retirement**

**Action Requested: Adoption of Retirement Memoir**

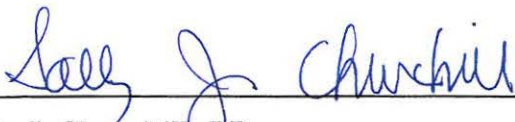
**Joel A. Smoller, Ph.D.**, Lamberto Cesari Collegiate Professor of Mathematics and professor of mathematics in the College of Literature, Science, and the Arts, will retire from active faculty status on May 31, 2017.

Professor Smoller received his B.S. (1957) degree from Brooklyn College, his M.S. (1958) degree from Ohio University, and his Ph.D. (1963) degree from Purdue University. He joined the University of Michigan faculty as an instructor in 1963, and was promoted to assistant professor in 1965, associate professor in 1968, and professor in 1970. He was named the Lamberto Cesari Collegiate Professor of Mathematics in 1998.

Professor Smoller's areas of specialty are shock wave theory, differential equations, dynamical systems, and general relativity. He completed research on Navier-Stokes equations, systems of reaction-diffusion equations, and bifurcation theory. He pioneered the analysis of numerical difference schemes for conservation laws in several space dimensions, introduced new topological methods to the analysis of partial differential equations, and has been fundamental in establishing the shock structure problem in mathematics. Many of his early results have been influential in mathematical biology. Professor Smoller's more recent research has been concerned with problems involving gravity, as described by Einstein's theory of general relativity on two different scales: the stability of Kerr black holes under various perturbations such as scalar waves, Dirac fields, electromagnetic waves, and gravitational waves; and astrophysical shock-waves, concerned with astrophysical problems, including an explanation of the anomalous acceleration of the universe, wholly within Einstein's equations of general relativity, and avoiding the cosmological constant, and the notion of dark energy. Professor Smoller has extended his research to stellar dynamics, including rotating Newtonian stars. His long and prestigious academic career includes supervising 28 graduate students and mentoring many postdoctoral faculty, producing more than 180 publications in association with 34 co-authors, and over 50 years of teaching hundreds of undergraduate and graduate students.

The Regents now salute this distinguished scholar by naming **Joel A. Smoller, Lamberto Cesari Collegiate Professor Emeritus of Mathematics and professor emeritus of mathematics**.

**Requested by:**



**Sally J. Churchill, J.D.**

**Vice President and Secretary of the University**

**May 2017**