

## THE UNIVERSITY OF MICHIGAN

### *Regents Communication*

#### ACTION REQUEST

**Subject:** Report of Faculty Retirement  
**Action Requested:** Adoption of Retirement Memoir

**Richard Gustafson, Ph.D.**, research scientist, physics in the College of Literature, Science and the Arts, retired from active faculty status on September 30, 2018.

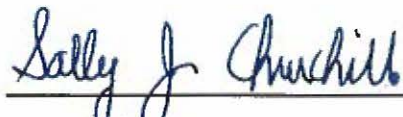
Dr. Gustafson received his B.S. (1959) degree from California Institute of Technology (Caltech) and his M.S. (1961) and Ph.D. (1968) degrees from the University of Washington. During graduate school, he worked as an electrical engineer and space physicist at Boeing where he tested and flew the Minuteman missile and also built and flew balloon-based particle space physics detectors from 1959-63. Dr. Gustafson joined the University of Michigan as a research associate in 1968, and was successively promoted to research scientist in 1991. For 50 years, he conducted research, taught introductory physics courses, organized seminars, and served the particle physics community by directing research grants.

Dr. Gustafson led Michigan experiments at the Lawrence Berkeley Lab, the Argonne Lab, and the Fermilab in hadronic physics and neutrino physics. He participated in the CERN L3 experiment and the 16 Fermilab experiments. Highlights of this work include the detection of 50,000 Upsilon events, high energy beam dump neutrinos, no CP violation in hyperon decay, determination of the number of neutrino species, and limits on the anti-proton lifetime. He also participated in a Fermilab collider experiment looking for a disordered chiral condensate. He performed independent experiments of magnetic monopole search, anti-proton lifetime limit, fractional charge search, parton-parton scattering, and recently Planck Scale detection physics.

Dr. Gustafson began work on gravity wave experiments at the Laser Interferometer Gravitational-Wave Observatory (LIGO) in 1996. He brought the LIGO prototype interferometer to its first successful sustained operation while working in residence at Caltech. He is presently at the LIGO Hanford Observatory, where he is focused on tracking down and eliminating noise sources, training more than 20 students, and developing new data analysis methods. The LIGO's discovery of gravitational waves in 2015 won many awards, among them the 2016 Breakthrough Prize to LIGO collaborators, including Dr. Gustafson, and Nobel prizes to LIGO founders Barry Barish, Kip Thorne, and Rainer Weiss. In recent years, he searched with collaborators at the Fermilab for the Planck Scale ( $10^{-35}$  m) of space-time using smaller, LIGO-like interferometers.

The Regents now salute this distinguished researcher by naming **Richard Gustafson research scientist emeritus, physics**.

**Requested by:**



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**Sally J. Churchill, J.D.**  
Vice President and Secretary of the University

October 2018