

THE UNIVERSITY OF MICHIGAN

Regents Communication

ACTION REQUEST

Subject: Report of Faculty Retirement

Action Requested: Adoption of Retirement Memoir

Katherine Freese, Ph.D., George E. Uhlenbeck Collegiate Professor of Physics and professor of physics in the College of Literature, Science, and the Arts, retired from active faculty status on May 31, 2019.

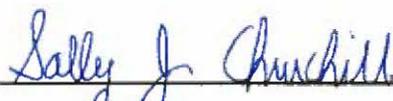
Professor Freese received her B.A. (1977) degree from Princeton University, her M.A. (1981) degree from Columbia University, and her Ph.D. (1984) degree from the University of Chicago. She joined the University of Michigan faculty as an associate professor in 1991, and was promoted to professor in 2000. She was appointed the George E. Uhlenbeck Collegiate Professor of Physics in 2009.

Professor Freese is a world-renowned theoretical cosmologist whose work at the interface of astrophysics and particle physics includes about 200 papers which have been cited over 10,000 times. Her key achievements have profoundly affected the field of cosmology. She pioneered (in 1986) the theoretical work that led to the beginning of underground dark matter experiments worldwide. In 1990, she postulated a new symmetry of nature, leading to one of the most compelling models of the early universe to date. She proposed (in 2002) one of the first modified-gravity explanations for dark energy, the component that leads to the accelerating expansion of the universe. She put forth (in 2008) the idea of “dark stars,” a new phase of star powered by dark-matter annihilation instead of nuclear fusion; these enormous objects collapse to leave seeds for the supermassive black holes observed today, and are detectable by NASA’s James Webb Space Telescope, due to launch in 2020.

Professor Freese was a founding member of the Michigan Center for Theoretical Physics. She was director of NORDITA, the Nordic Institute for Theoretical Physics, from 2014-16. Her national and international service includes memberships on boards and committees of leading physics institutions worldwide. She is a fellow of the American Physical Society. She was awarded a Simons Foundation Fellowship in 2012 and the Lilienfeld Award from the American Physical Society in 2019. She has a very strong record of science communication, as evidenced by about 300 talks around the world and frequent appearances in the news media and television. She authored a book, *The Cosmic Cocktail: Three Parts Dark Matter*, published in 2014.

The Regents now salute this distinguished scholar by naming **Katherine Freese, George E. Uhlenbeck Collegiate Professor Emerita of Physics and professor emerita of physics.**

Requested by:



Sally J. Churchill, J.D.

Vice President and Secretary of the University

May 2019