

THE UNIVERSITY OF MICHIGAN

Regents Communication

ACTION REQUEST

Subject: Report of Faculty Retirement

Action Requested: Adoption of Retirement Memoir

Yue-Ying Lau, Ph.D., professor of nuclear engineering and radiological sciences in the College of Engineering, retired from active faculty status on December 31, 2021.

Professor Lau was born in Hong Kong, where he received his high school education. He received his B.S. (1968), M.S. (1970), and Ph.D. (1973) degrees in electrical engineering from the Massachusetts Institute of Technology (MIT). He taught applied mathematics in the Department of Mathematics at MIT as an instructor (1973-75) and assistant professor (1975-79). He was a research physicist at the Naval Research Laboratory (NRL), first as an on-site contractor with the Science Applications International Corporation (1980-83), and later as an NRL staff member (1983-92). Professor Lau joined the University of Michigan faculty as a professor in 1992.

Professor Lau's early MIT research on spiral disk galaxies is recognized as a major theoretical advance. His pioneering research at NRL on gyrotron and klystron amplifiers altered the course in the development of high-power microwave sources. At the University of Michigan, Professor Lau led the theoretical research group in the Plasma, Pulsed Power and Microwave Laboratory. He and his students have written definitive papers on the stability of beams and plasmas, high-power microwave sources, dielectric breakdown and multipactor discharge, novel cathodes, wire Z-pinch physics, heating phenomenology, physics of crossed-field electron devices, higher dimensional and quantum diodes, and Thomson X-ray sources.

During his career, Professor Lau served as chair or co-chair of 32 graduated students' doctoral committees. He has published over 250 refereed papers, several book chapters, 11 patents and hundreds of conference papers and abstracts. His many awards include: the Sigma-Xi Scientific Society Applied Science Award (1989), American Physical Society fellow (1986), Institute of Electrical and Electronic Engineering (IEEE) fellow (2008), the IEEE Plasma Science and Applications Award (1999), and the IEEE John R. Pierce Award for Excellence in Vacuum Electronics (2017). He also served as associate editor of *Physics of Plasmas* (3-terms, 1994-2002).

The Regents now salute this distinguished faculty member by naming **Yue-Ying Lau, professor emeritus of nuclear engineering and radiological sciences**.

Requested by:



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

February 2022