



James Paul Holloway

James Paul Holloway is the Vice Provost for Global Engagement and Interdisciplinary Academic Affairs, Arthur F. Thurnau Professor, Professor of Nuclear Engineering and Radiological Sciences

Professor Holloway earned Bachelors and Masters degrees in Nuclear Engineering from the University of Illinois, a CAS in Mathematics from Cambridge University, and doctorate in Engineering Physics at the University of Virginia, where he was subsequently Research Assistant Professor of Engineering Physics and Applied Mathematics. Professor Holloway joined the faculty of the University of Michigan as an assistant professor for Nuclear Engineering and Radiological Sciences in January 1990. Subsequently promoted to Associate then Full professor, in 2007 he was named an Arthur F. Thurnau Professor in recognition of outstanding contributions to undergraduate education. Later that year, he became associate dean for undergraduate education for the College of Engineering. He has served as Vice Provost since 2013, with a growing portfolio of responsibilities covering global engagement, engaged learning and scholarship, and interdisciplinary academic affairs.

Prof. Holloway's work has focused on computational and mathematical modeling of neutral particle transport, plasma kinetics and hydrodynamics, and related problems in inverse problems and plasma tomography. Along with his students, he developed the first Riemann solvers for time dependent neutral particle transport, which included the first successful solutions of low-order nonlinear maximum entropy closures for transport equations. They also developed methods for discretizing infinite dimensional Hamiltonian systems, such as the Vlasov equation, into finite dimensional systems that preserved symplectic structure. They explored spectral discretization in several contexts, including in functional expansion tallies for Monte Carlo methods. Holloway served as co-PI on the University of Michigan's CRASH center, and led the center's uncertainty quantification program. As part of that effort he and the team pushed several statistical ideas in model calibration and model emulation into large scale simulations calibrated with limited experimental data. He served as Editor-in-Chief of the journal Transport Theory and Statistical Physics. He has also undertaken research in engineering education, including studying student identity and gender in the engineering classroom. Holloway's teaching has spanned from large first

year classes to specialized graduate level courses. He has taught a course for education student on engineering in the high school classroom, and also Engineering Across Cultures, not only in Ann Arbor but in Kumasi, Ghana, and Chiang Mai, Thailand.

As Vice Provost for Global Engagement and Interdisciplinary Academic Affairs, Professor Holloway is focused on the ways in which the U-M engages the world through both scholarship and education. He facilitates the creation of interdisciplinary activities at Michigan spanning sustainability scholarship to engaged research in poverty alleviation. He is interested in developing a global perspective in U-M scholarship and in its impact, and in facilitating the development of a broad set of platforms for experiential learning accessible to all students at the U-M.

Professor Holloway has lived in Thailand, Germany, and England.