

**8th Annual Meeting of the Michigan Physiological Society
The Michigan Chapter of the American Physiological Society
Friday, June 25, 2021**

2021 MPS Distinguished Lecture

Friday, June 25, 2021

12:00 pm - 1 pm

James A. Pawelczyk, PhD

Associate Professor

Kinesiology and Medicine

Pennsylvania State University

“Human Limits to Exploring Mars”



It is our honor to present Dr. James A. Pawelczyk, our Keynote Speaker for the 8th annual Michigan Physiological Society meeting hosted virtually on Zoom. Dr. Pawelczyk is a distinguished physiologist, with an extraordinary history of contributions to the discipline of physiology across the domains of research, teaching, and service. He holds degrees from the University of Rochester, Pennsylvania State University, and University of North Texas.

Full Bio

James A. (Jim) Pawelczyk received Bachelor of Arts Degrees in Biology and Psychology from the University of Rochester in 1982, a Masters of Science in Physiology from Penn State University in 1985, and a Ph.D. in Biology (Physiology) from the University of North Texas in 1989. He completed a post-doctoral fellowship at the University of Texas Southwestern Medical Center at Dallas in 1992, then joined the faculty as an Assistant Professor of Cardiology and Bioengineering. In that capacity he served as the Director of the Autonomic and Exercise Physiology Laboratories and a founding member

of the Institute for Exercise and Environmental Medicine, a clinical research collaboration between UT Southwestern and Presbyterian Hospital of Dallas. In 1995 he joined the faculty of the Pennsylvania State University where he is now an Associate Professor of Physiology, Kinesiology and Medicine. He founded and directs the University's novel dual-title Ph.D. program in Clinical and Translational Sciences, and has received College and University awards for his contributions to the University's teaching and outreach missions.

Dr. Pawelczyk's research focuses on the dynamic regulation of blood pressure, and how disuse atrophy affects blood pressure regulation. Problems with moment-to-moment regulation of blood pressure lead to orthostatic intolerance, an inability to maintain adequate blood flow to the brain that affects as many as 500,000 Americans. The condition is routinely observed following spaceflight, which Dr. Pawelczyk has studied as a NASA funded investigator for the past six years. In 1995 he was selected as a Payload Specialist for the Neurolab space shuttle mission, and flew aboard STS-90 on the space shuttle Columbia in April and May of 1998. He logged 16 days and 6.4 million miles in space, circling the earth 256 times and conducting neuroscience experiments that addressed changes in the development of the nervous system, balance, blood pressure regulation, sleep, and control of movement during spaceflight.

Dr. Pawelczyk assists the formation of U.S. space life sciences strategy. He has testified before the United States Senate Subcommittee on Science and Space, and is an active member of the NASA Advisory Council's Research Subcommittee for Human Exploration, the National Research Council's Committee on Biological and Physical Sciences in Space, and the Institute of Medicine's Committee on Aerospace Medicine and Extreme Environments. The latter two are part of the National Academies, chartered by Congress to address critical national issues and give advice to the federal government and the public.