



# Translational and bioinspired technologies for restoring neural connections and enhancing performance

## Galit Pelled, PhD

Professor of Mechanical Engineering, Radiology and Neuroscience  
Michigan State University

My research focuses on understanding motor behavior and developing devices and analytical tools for enhancing neuro-performance that will lead to higher levels of speed and strength. We are capitalizing on advances in neuroengineering, neuroimaging and neuromodulation technologies to restore motor and cognitive function in translational models of Traumatic Brain Injury. Multidimensional measurements including multi-parametric MRI, motion analytics, electrophysiology, behavioral tests, and wearable sensors, are applied to gain a holistic understanding of how the neuromodulation protocols affect neuro-performance and recovery. We are also developing innovative hardware and computational tools to study motor control and motor behavior in octopus; This work can inspire new understanding about how our brain works and facilitate the development of new brain-machine interface technologies and smart prosthetics.



## ABOUT the SPEAKER

Galit Pelled, PhD, is a Professor of Mechanical engineering, Neuroscience and Radiology at Michigan State University. She completed her undergraduate and Ph.D. studies in Neuroscience at the Hebrew University in Jerusalem in 2004. After completing a postdoctoral fellowship at the National Institutes of Health (Bethesda, MD) in 2008, she joined the Johns Hopkins School of Medicine Department of Radiology and Kennedy Krieger Institute (Baltimore, MD) as an Assistant Professor, and in 2014, she was promoted to an Associate professor. In 2017 she was recruited as a tenured Professor to Michigan State University to establish and lead the Neuroengineering division in the College of Engineering. Her work focuses on developing hardware, computational and neuromodulation technologies to restore and increase neuro-performance.

**Monday, December 2 at Noon**  
**1003 Engineering Centers (Tong Auditorium)**

