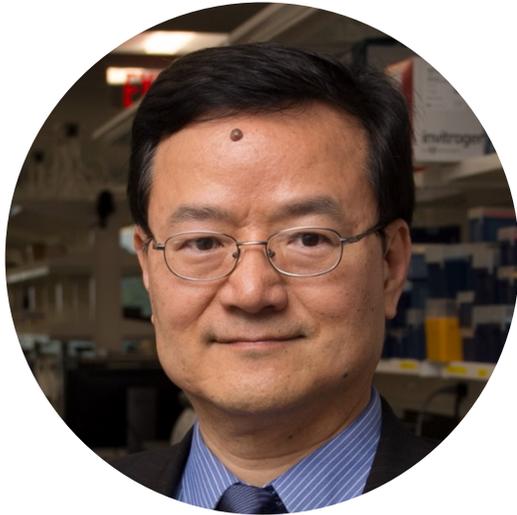


MAURY STRAUSS DISTINGUISHED PUBLIC LECTURE

Presented by the Fralin Biomedical Research Institute at VTC



BIN HE, Ph.D.

Trustee Professor of Biomedical Engineering
Director, Neural Interfacing Training Program
Carnegie Mellon University, Pittsburgh, Pa.

Fellow of the International Academy of Medical
and Biological Engineering

In Person Lecture: Dynamic Brain Mapping and Brain-Computer Interface

Brain activity is distributed over the 3-dimensional volume and evolves in time. Mapping spatio-temporal distribution of brain activation with high spatial resolution and high temporal resolution is of great importance for understanding the brain and aiding in the clinical diagnosis and management of brain disorders. Electrophysiological source imaging from noninvasively recorded high density electroencephalogram has played a significant role in advancing our ability to image brain function and dysfunction. Dr. He will discuss his lab's recent work in localizing and imaging brain activity and networks in healthy humans, and seizure generating networks in drug-resistant epilepsy patients, using high density electroencephalograms recorded from the scalp. Discussion involves principles and state-of-the-art of brain-computer interface using noninvasive brain waves, from which human "intention" is decoded using novel machine learning algorithms. Dr. He's research shows that humans are able to control the flight of a drone and a robotic arm, just by thinking about it with recordings from noninvasive electroencephalograms. His team's results also show that experience with mindful meditation or yoga can improve human capability for mind control.

THURSDAY, MAY 5 at 5:30 p.m.

Reception and hors d'oeuvres at 5 p.m. in VTC Cafe

Room M203, 2 Riverside Circle, Roanoke. In person attendance encouraged, refreshments at 5 p.m. Watch live at

<https://virginiatech.zoom.us/j/89350646999> or <https://fbri.vtc.vt.edu/events/live-webcast.html>.



FRALIN BIOMEDICAL
RESEARCH INSTITUTE AT VTC
VIRGINIA TECH.