



# UAS at UTK: Drones for Research

SAL Brown Bag Lunch  
Seminar Series

## "Planar control of a quadcopter using Brain Machine Interface"

**Dr. Xiaopeng Zhao**

**Mechanical, Aerospace, and Biomedical Engineering  
University of Tennessee, Knoxville**

**12:15 p.m., Friday, November 2, 2018**

**NIMBioS, Hallam Auditorium (Room 206)  
Claxton Education Building**

Brain Machine interface (BMI) enables promising applications in neuroprosthesis and neurorehabilitation by controlling robotic devices based on the subject's intentions. In contrast to the earlier techniques using sensorimotor rhythms, the method here intends to directly extract information of imagined body kinematics and thus can significantly reduce training time. We developed a BMI platform that controls a quadcopter using noninvasively acquired brain signals. Scalp electroencephalogram (EEG) signals of a user's imaginary movements are collected in real-time and translated by a computer to control a quadcopter along a designated path in a two-dimensional space. The BME paradigm may be utilized in controlling neuroprosthetic limbs and neurorehabilitation devices.

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