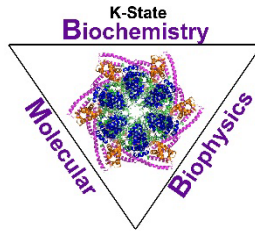


Ackert Hall, Room 120
Wednesday, May 7, 2025
4:00 P.M.



Coffee and Cookies
Chalmers Hall, Room 168
3:45 P.M.

Biochemistry
&
Molecular
Biophysics

Seminar

**Investigating brain circuits and neuroplasticity with
transcranial magnetic stimulation combined with
electroencephalography**

Julio C Hernandez-Pavon

Psychological Sciences
Kansa State University

Transcranial magnetic stimulation (TMS) combined with EEG (TMS-EEG) is a powerful technique to investigate human connectivity of interconnected brain areas. In this presentation, I will show how to use TMS-EEG to assess neuronal communication between the right and left primary motor areas (M1s). I will also demonstrate that these neurophysiological responses can be used to develop new neuromodulation protocols, such as cortico-cortical paired associative stimulation (ccPAS), where the interstimulus interval between the stimulation targets determines if the connection is increased or decreased. Finally, we will elaborate on the implications of this approach on other brain areas and clinical applications.