



*School of Education
Colloquium Series*
**Learning and the Brain:
Contributions of
Neuroscience to Education**

March 6
1:25–2:25 pm
Willard Hall 207



featuring
Jiahui Wang
**School of Teaching,
Learning, and
Curriculum Studies**
Kent State University



Educational Neuroscience and Technology-Enhanced Learning

Educational technologies are used by a wide range of students with differences in attention, cognition, and motivation. Millions of learners of all ages take online courses using platforms such as Coursera and Khan Academy. To date, however, most educational technologies are designed using a “one-size-fits-all” approach. Wang's talk will focus on the effects of instructor presence in online videos and how individual differences in working memory capacity and inhibitory control affect learning outcomes.

Her talk will also discuss several research projects focusing on educational technologies that are used extensively in online learning environments and designed to address differences in reading ability and visuospatial skills, specifically among individuals with dyslexia. In addition to traditional outcome measures of learning, her research has also employed measures that provide insights into the process of cognition and learning. These measures use neurocognitive and psychophysiological tools such as Electroencephalography (EEG) and eye-tracking to study the attentional and cognitive processes underlying learning.

About Jiahui Wang

Dr. Jiahui Wang is an Assistant Professor of Educational Technology at Kent State University. Wang's research examines how people with individual differences learn STEM content in technology-enhanced environments and how learning environments can be designed to accommodate individual needs. She explores the influence of individual differences in cognition (e.g., working memory capacity), pre-existing interest and knowledge, as well as learning disability (e.g., dyslexia). Her research employs neurocognitive and psychophysiological tools such as electroencephalography (EEG) and eye-tracking to study the underlying attentional and cognitive processes while learning with technology. The learning environments include K-12 classrooms, multimedia learning, online learning, and digital game-based learning.