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2017 WORKSHOP SERIES

Approaches to Model-based Cognitive Neuroscience

Cognitive neuroscience aims to identify neural mechanisms associated with key aspects of cognition using techniques like neurophysiology, electrophysiology, and structural and functional brain imaging. Cognitive modeling has a rich history of formalizing and testing hypotheses about cognitive mechanisms within a mathematical and computational language, making exquisite predictions about how people perceive, learn, remember, and decide. These two come together in a powerful approach called model-based cognitive neuroscience, which can both inform cognitive modeling and help to interpret neural measures. Neural measures provide data that help constrain cognitive models and adjudicate between competing cognitive models that make similar predictions about behavior. Reciprocally, cognitive models decompose complex behavior into representations and processes and these model states can be used to explain the modulation of brain states under different experimental conditions.

Presented by:

Thomas J. Palmeri

Department of Psychology

Vanderbilt University

Friday, November 17, 2017

12:00 PM – 1:00 PM

512 Light Hall

Sponsored by: Vanderbilt Ingram-Cancer Center & Vanderbilt Center for Quantitative Sciences

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