

# Seminar Series

Friday, November 30, 2018

4:00pm

West Hall, Room 340



## Person Specific Temporal Networks: Accuracy, Dynamics, and Emojis 🤔

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**Abstract:** Networks are everywhere! They provide a powerful way to detect patterns and relationships within big data systems. But, are they meaningful when the “system” is an individual person? Indeed, the reliability and validity of network approaches have been questioned in the social and medical sciences; network results are assumed to generalize across people and time, but these assumptions rarely hold because people are heterogeneous and dynamic. The goal of this presentation is to introduce a person-specific perspective to network modeling, and to illustrate the accuracy of a particular modeling approach called group iterative multiple model estimation (GIMME). Two novel GIMME-related applications will also be presented. In the first, GIMME will be used to detect individualized time-varying neural connectivity during a resting state, revealing connectivity parameters that are associated with cognitive impulsivity. In the second, GIMME will be used to identify personalized links among emoji-based emotion structures and daily depressive symptomatology. This is an ongoing work with possible extensions to big(ger) data (e.g., Twitter) and with implications for precision health care.

**Bio:** Dr. Adriene Beltz is an Assistant Professor of Psychology at the University of Michigan. She is affiliated with the developmental area and plays a significant role in the department’s quantitative training, including the teaching of graduate methods courses.

Dr. Beltz received her Ph.D. in Psychology, specializing in Social, Cognitive, and Affective Neuroscience from the Pennsylvania State University in 2014. Her training was supervised by Dr. Sheri Berenbaum, an expert in human behavioral endocrinology whose research has been funded by the National Institutes of Health for three decades. Dr. Beltz then transitioned to a post-doctoral position in Human Development and Family Studies at the Pennsylvania State University. She worked with the internationally-renowned methodologist, Dr. Peter Molenaar, on connectivity analysis approaches for fMRI data. Prior to Penn State, Dr. Beltz received her B.S. in Psychology and M.S. in Experimental Psychology at Saint Joseph’s University in Philadelphia.

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