

# SPECIAL RESEARCH SEMINAR

Presented by the Center for Human Neuroscience Research at the Fralin Biomedical Research Institute at VTC



FRALIN BIOMEDICAL RESEARCH INSTITUTE AT VTC  
CENTER FOR HUMAN  
NEUROSCIENCE RESEARCH  
VIRGINIA TECH.



**HOLLY O'ROURKE, Ph.D.**

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## *In Person Seminar: Building Superior Multivariable Systems to Enhance Precision in Models of Behavior Change*

Statistical theories of change are like theories of behavior in that they can be enhanced to address more refined hypotheses. Complex research questions are often addressed with studies that involve many variables, and they require statistical models that are correspondingly complex. Such research questions can be modeled with some form of multivariable system (MVS). Dr. O'Rourke's statistical research both develops novel MVSs and enhances existing ones, with the objective of creating superior statistical models that are widely adoptable and easy to implement. This enables applied researchers to investigate more sophisticated theoretical questions concerning behavior change. In this talk Dr. O'Rourke will describe her research on several MVSs for modeling behavior change that range in complexity from few variables and time points (mediation models) to many variables and time points (latent change score models and Group Iterative Multiple Model Estimation: GIMME). She will briefly introduce these MVSs and their relation to one another in the context of her past and ongoing work, describe their usefulness in applied settings, and end with future directions for building upon these MVSs.

**WEDNESDAY, AUG. 23, 2023 at 11 a.m.**

Room G101 A/B, 4 Riverside Circle

Or watch via Zoom: <https://virginiatech.zoom.us/j/88292919959>



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