

THE DEPARTMENT OF EDUCATIONAL PSYCHOLOGY'S RESEARCH METHODS,
MEASUREMENT, & EVALUATION (RMME) PROGRAMS AND THE DEPARTMENT OF
STATISTICS AT THE UNIVERSITY OF CONNECTICUT PRESENT:

EFFECTS ACROSS TIME TO MODELING STATES OF A SYSTEM: A DYNAMICAL SYSTEMS PERSPECTIVE ON MODELING SOCIAL SCIENCE DATA

DR. PASCAL R. DEBOECK, UNIVERSITY OF UTAH

Modeling of repeated observations across time generally falls into one of two categories. The first is modeling observations as they change across time; that is, as a function of time. The second is to model the observations as they relate to prior observations; many common models in the social sciences are represented in this second category, including auto-regressive models, cross-lagged panel models, and latent difference score models. A less-common approach in this latter category are differential equation models. These models express relations between the state of observations and how they are changing. These models offer the opportunity to imagine change relations that may be commonly overlooked when modeling repeated measures. This talk will introduce the application of differential equation modeling to intensive, longitudinal data. Specific examples will include estimating derivatives from noisy data and the possibility of testing novel models of intraindividual dynamics.



Dr. Pascal R. Deboeck is an associate professor at the University of Utah. His research focuses on the development and application of methods for the analysis of intensive, intraindividual time series. This work has included the development and application of derivatives, differential equation modeling, and dynamical systems concepts to time series, daily diaries, and other intensive longitudinal data. He has applied this work to a wide range of substantive areas, including resiliency and affect in older adults, health and depression as long-term outcomes of daily stress processing, sustained attention while driving, passive data and binge eating, the coupling of maternal depression with child behavior, and mood change in patients with rapid cycling bipolar disorder.

Colloquium Access Information:

Friday, 11/15/2024, 11am, ET

<https://tinyurl.com/rmme-Deboeck>

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