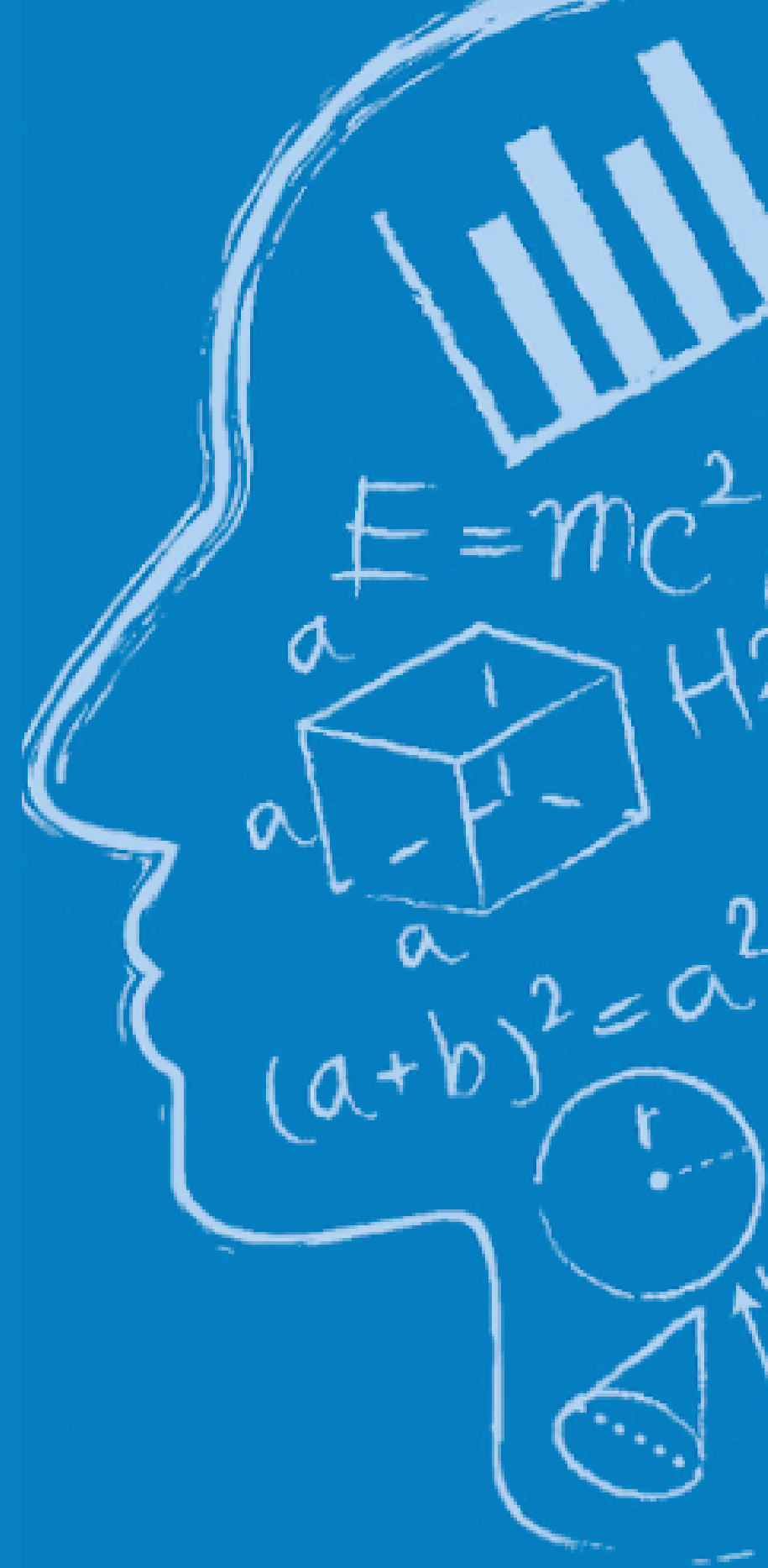


SEMINAR

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COMPUTATIONAL METHODS FOR HEALTHCARE ACCESS MODELING

ABSTRACT:

This seminar will begin with an introduction of the multidimensional construct of healthcare access, providing a well-established definition and common objectives in access measurement and inference. Different approaches will be presented, focusing on rigorous mathematical models to estimate access, including optimization and simulation under uncertainty of the model inputs. Important aspects will be covered including spatial dependence in the decision parameters of optimization models used to estimate healthcare access and Bayesian hierarchical models used to specify the sampling distributions of model inputs. The models will be illustrated for modeling access to mental healthcare in Georgia, United States.



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SPEAKER

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Nicoleta Serban is Peterson Professor in the H. Milton Stewart School of Industrial and Systems Engineering at the Georgia Institute of Technology. Dr. Serban's research record is quite diverse, from statistical learning and mathematical modeling to data analysis using massive datasets, with recent contributions on drawing principled inferences on health services research, health policy, and health population-based public health. She had been the editor for physical sciences, engineering, and the environment for the Annals of Applied Statistics Journal from 2014 to 2021 and participated in multiple National Academy of Engineering (NAE) and Institute of Medicine (IOM) workshops and Frontiers of Engineering, and Science Symposiums organized by NAE and IOM. She is currently member of two state committees, the Georgia All-Payer Claims Database Advisory Committee and the Georgia Behavioral Health Reform & Innovation Commission. She has reviewed for multiple funding agencies, including National Institutes of Health, Patient-Centered Outcomes Institute, National Science Foundation, among others. To date, she has published more than 75 peer-reviewed journal articles, a collaborative (with Dr. William B. Rouse) book titled Understanding and Managing the Complexity of Healthcare and single-authored book titled Healthcare System Access: Measurement, Inference and Intervention.