

Quantitative Health Sciences



Quantitative Methods Core Methods Seminars

Tuesday, October 16, 2018

12:00-1:00pm

Albert Sherman Center, AS9.2072

“Combinatorial Inference for Brain Imaging Datasets”

Presented by:

Dr. Junwei Lu, Ph.D.

Assistant Professor of Biostatistics

Harvard T.H. Chan School of Public Health

We propose the combinatorial inference to explore the global topological structures of graphical models. In particular, we conduct hypothesis tests on many combinatorial graph properties including connectivity, hub detection, perfect matching, etc. Our methods can be applied to any graph property which is invariant under the deletion of edges. On the other side, we also develop a generic minimax lower bound which shows the optimality of the proposed method for a large family of graph properties. Our methods are applied to the neuroscience by discovering hub voxels contributing to visual memories.

Lunch will be provided, please RSVP to Tammy Falla at (tammy.falla@umassmed.edu)