Quantitative Methods Core Methods Seminars

Tuesday, April 2, 2019
12:00-1:00pm
Albert Sherman Center, AS9.2072

“Model-based Approaches for Data Visualization Ability Assessment”

Presented by: Lane Harrison, PhD
Assistant Professor in the Department of Computer Science at Worcester Polytechnic Institute

Lane Harrison is an Assistant Professor in the Department of Computer Science at Worcester Polytechnic Institute. Prior to joining WPI, Lane was a postdoctoral fellow in the Department of Computer Science at Tufts University. He obtained his Bachelor’s and PhD degrees in computer science from the University of North Carolina at Charlotte, supported by a DHS Visual Analytics Fellowship for his work on designing visualization tools for cyber security data. In 2015 he served as general chair for the IEEE Visualization for Cyber Security (VizSec) Symposium, held in conjunction with the IEEE VIS Conference.

Lane directs the VIEW lab at WPI, where he and his students leverage quantitative and computational methods to understand how people interpret, use, and create data visualizations and visual analytics tools. Data visualization is an indispensable tool for analysis and understanding. Because we are beginning to rely on visualizations to make high-impact, even life-critical decisions in areas like health and cyber security, we must ensure that people have the best tools and information for the decisions they face.

Data visualization is making strides in delivering new tools, techniques, and systems to analysts engaged in data analysis and communication. But providing more options leads to a paradox of choice- how do creators of data visualizations navigate the tradeoffs and uncertainty between available design and techniques? One promising approach towards addressing this growing problem is to quantify and model how people use and interpret data visualizations. In this talk I'll share recent developments ranging from modeling low-level perceptual task performance in visualization, to quantifying aspects of higher level behavior like engagement in interactive visualizations. Re-centering visualization on user abilities not only aids creators in designing data visualizations, but also leads to new opportunities for next-generation visualization tools, techniques, and systems.

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Lunch will be provided, please RSVP to Sandra Manning (Sandra.manning@umassmed.edu)