



UNCLASSIFIED

Information Science and Technology Seminar Speaker Series and Data Science at Scale Summer School Speaker Series



Bernice E. Rogowitz
Visual Perspectives

Visualization and Visual Representation: Nuggets of Wisdom from Research in Vision and Cognition

Wednesday, August 13, 2014

3:00 - 4:00 PM

TA-3, Bldg. 1690, Room 102 (CNLS Conference Room)

Abstract: In visualization, we map data values and relationships onto visual dimensions to create a visual representation. But, how well does that visualization represent the features and structures in the data? How well does it highlight aspects of the data that will help the analyst make good decisions? With all the visualization methods out there, is there one that is right?

Using examples from financial risk analysis, cardiac modeling, and high-energy physics, I will demonstrate how the application of insights from the study of color perception, perceptual scaling and attention can help guide your visualization choices. I will also emphasize the importance of matching the visual representation to analyst's task, and focus on representing magnitude, highlighting, and finding high-dimensional semantic features.

Biography: Bernice Rogowitz is a perceptual psychologist who draws research inspiration from visualization and imaging applications in medicine, finance, and physics. Dr. Rogowitz received her Ph.D. from Columbia University and was a postdoc at Harvard. As a scientist and research manager at the IBM T.J. Watson Research Center, Dr. Rogowitz led research on visual representation, semantics, and analysis, producing both fundamental science and practical tools. She has recently founded a research and consulting company, called Visual Perspectives, which helps companies and research labs integrate principles of human perception and cognition into their programs. She is the founder of a multidisciplinary conference on Human Vision and Electronic Imaging, whose goal is to foster research at the intersection between perception, imaging technology and art. She is a Fellow of the SPIE and the IS&T, has published over 70 papers, and has issued patents in areas ranging from visualization to haptic interfaces to nanotechnology.

For more information contact the technical host Curt Canada, cvc@lanl.gov, 665-7453.

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