UNCLASSIFIED

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

Kristin Potter
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Statistical Uncertainty: From Quantification to Visualization

Wednesday, August 20, 2014

3:00 - 4:00 PM

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

Abstract: Statistics are commonly used to quantify and visualize uncertainty in data sets. In this talk, I will explore the use of statistics in understanding complex problems and describe the look of typical datasets created in this way. From there, I will discuss challenges of displaying these complex data sets, and statistical measures specific to expressing uncertainty within visualization. The remainder of the talk will focus on visualization methods, including a recounting of historical methods from the field of graphical data analysis including the boxplot, as well as an overview of methods from scientific and information visualization. Examples of current state-of-the art methods will be presented and a discussion of pending challenges in need of further exploration.

Biography: Kristi is a visualization consultant and research programmer at the University of Oregon, working with the College of Arts and Science research support team. Her current research is focused on methods for improving visualization techniques by adding qualitative information concerning uncertainties present throughout the entire scientific pipeline. This work includes researching statistical measures of uncertainty, error, and confidence levels, and translating the semantic meaning of these measures into visual metaphors. In addition to research in visualization, she is working to bring visualization technologies to the university through classes, workshop, seminars and private consultation. She received her PhD in 2010 and MS in 2003 from Utah, and her BS in 2000 from the University of Oregon in computer science and fine art. She is serving on the Anita Borg Systers Pass-It-On Awards committee, and acted as chair from 2011 to 2013.

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

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