UNCLASSIFIED

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

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Why You Should (probably) Not be Doing "Uncertainty Visualization"

Wednesday, August 27, 2014

4:00 - 5:00 PM

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

Abstract: The visualization of stochastic or uncertain data is typically referred to "uncertainty visualization". However, this terminology implieds associated set of assumptions about the paradigm for visualization, which is typically to display an answer that has been modulated or augmented by an associated uncertainty. This however, asserts the existence of a renderable answer, which defies one of the underlying goals or principles of visualization, which is the exploration of data to obtain a holistic understanding or to discover properties that have no associated, a priori hyphothesis. An alternative paradigm, is "variability visualiziation" where the goal of the visualization is to explore or better understand the set of possible outcomes, or the probability distribution, associated with a set of data. One example of such an approach is the method of contour boxplots, which relies on a generalization of data depth, from descriptive statistics, to render the variability of solutions in an ensemble of isocountours.

Biography: Ross Whitaker graduated Summa Cum Laude with B.S. degree in Electrical Engineering and Computer Science from Princeton University in 1986. From 1986 to 1988 he worked for the Boston Consulting Group, entering the University of North Carolina at Chapel Hill in 1989. At UNC he received the Alumni Scholarship Award, and completed his Ph.D. in Computer Science in 1994. From 1994-1996 he worked at the European Computer-Industry Research Centre in Munich Germany as a research scientist in the User Interaction and Visualization Group. From 1996-2000 he was an Assistant Professor in the Department of Electrical Engineering at the University of Tennessee and received an NSF Career Award. Since 2000 he has been at the University of Utah where he is a Professor in the School of Computing and a faculty member of the Scientific Computing and Imaging Institute. He teaches discrete math, scientific visualization, and image processing. He has leads graduate-level research group in image analysis, geometry processing, and scientific computing, with a variety of projects supported by both federal agencies and industrial contracts.

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

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