UNCLASSIFIED

Information Science and Technology Seminar Speaker Series

Cecilia Aragon
University of Washington

The Hearts and Minds of Data Science

Wednesday, June 17, 2015

3:00 - 4:00 PM

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

Abstract: Thanks in part to the recent popularity of the buzzword "big data," it is now generally understood that many important scientific breakthroughs are made by interdisciplinary collaborations of scientists working in geographically distributed locations, producing and analyzing vast and complex data sets. The extraordinary advances in our ability to acquire and generate data in physical, biological, and social sciences are transforming the fundamental nature of science discovery across domains. Much of the research in this area, which has become known as data science, has focused on automated methods of analyzing data such as machine learning and new database techniques. Less attention has been directed to the human aspects of data science, including how to build interactive tools that maximize scientific creativity and human insight, and how to train, support, motivate, and retain the individuals with the necessary skills to produce the next generation of scientific discoveries.

In this talk, I will argue for the importance of a human-centered approach to data science as necessary for the success of 21st century scientific discovery. Further, I attest that we need to go beyond well-designed user interfaces for data science software tools to consider the entire ecosystem of software development and use: we need to study scientific collaborations interacting with technology as socio-technical systems, where both computer science and social science approaches are interwoven. I will discuss promising research in this area, describe the current status of the Moore/Sloan Data Science Environment at UW, and speculate upon future directions for data science.

Biography: Cecilia Aragon is an associate professor in the Department of Human Centered Design & Engineering at the University of Washington (UW), where she directs the Human-Centered Data Science Lab. She is a Senior Data Science Fellow with the UW eScience Institute and leads UW's Ethnography and Evaluation Working Group as one of the PIs of the $38M Moore/Sloan Data Science Environment. She holds courtesy appointments in Computer Science and Engineering, Electrical Engineering, and the Information School. She earned her Ph.D. in computer science from UC Berkeley in 2004 and her B.S. in mathematics from the California Institute of Technology.

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