



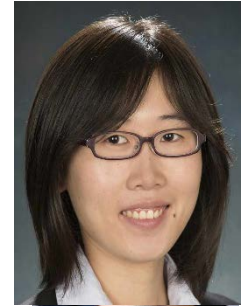
Washington University in St. Louis

SCHOOL OF ENGINEERING & APPLIED SCIENCE

Preston M. Green Department of Electrical & Systems Engineering

Seminar Announcement

Yuejie Chi, Ph.D.
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Department of SBS-Biomedical Informatics and
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The Ohio State University



Thursday, February 23, 2017
Green Hall, Room 0120
10:00 A.M.

Exploiting Geometry for High-Resolution Source Localization

Abstract: Source localization is an important problem across engineering and applied science, where the goal is to invert an acquired image for the underlying source signal that produced it. In this talk, driven by novel applications in imaging and sensor technologies, we consider source localization when conventional approaches become highly suboptimal or no longer apply, due to the existence of missing data, outliers, interference or lack of calibration in data acquisition. We will illustrate geometric data representations that exploit sparsity and physically-meaningful constraints, show how they lead to provably efficient and robust algorithms for source localization using the highly versatile framework of convex optimization, and demonstrate applications of some of these results in super-resolution microscopy imaging.

Bio: Dr. Yuejie Chi received the Ph.D. degree in Electrical Engineering from Princeton University in 2012, and the B.E. (Hon.) degree in Electrical Engineering from Tsinghua University, Beijing, China, in 2007. Since September 2012, she has been an assistant professor with the department of Electrical and Computer Engineering and the department of Biomedical Informatics at The Ohio State University. She is a recipient of several research awards, including NSF CAREER Award, AFOSR Young Investigator Program Award, ONR Young Investigator Program Award, ORAU Ralph E. Powe Junior Faculty Enhancement Award, Google Faculty Research Award, IEEE Signal Processing Society Young Author Best Paper Award and Best Student Paper Award at the IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP). Currently she is an Elected Member of the MLSP and SPTM Technical Committees of the IEEE Signal Processing Society. She has held visiting and internship positions at Colorado State University, Stanford University, Duke University, Air Force Research Lab, Qualcomm Inc. and Mitsubishi Electric Research Lab. Her research interests include statistical signal processing, mathematical optimization, machine learning and their applications in high-dimensional data analysis, network inference, active sensing and bioinformatics.

Host: R. Martin Arthur