

**Events**[Current Events](#)[Lectures](#)[Events Archive](#)

## Computational Mathematics Seminar Series

**Statistical inference for sample average approximation of constrained optimization and variational inequalities****Shu Lu, University of North Carolina at Chapel Hill**

Associate Professor

Digital Media Center 1034  
April 10, 2018 - 03:30 pm**Abstract:**

The sample average approximation is widely used as a substitute for the true expectation function in optimization and equilibrium problems. We study how to provide a confidence region or confidence intervals for the true solution, once the SAA solution is obtained. Our method is based on the asymptotic distribution of the SAA solution, and we handle polyhedral constraints by examining the nonsmooth structure of the asymptotic distribution.

**Speaker's Bio:**

Shu Lu received her B.S. and M.S. in Civil Engineering from Tsinghua University, and her M.A. in Mathematics and Ph.D. in Industrial and Systems Engineering from the University of Wisconsin-Madison. She is currently Associate Professor at the Department of Statistics and Operations Research, University of North Carolina at Chapel Hill. Her research interests include variational inequalities and variational analysis, optimization under uncertainty, and their applications.

**This lecture has refreshments @ 03:00 pm**