

EPSTEIN INSTITUTE SEMINAR ▪ ISE 651

Learning Enabled Optimization (LEO)

ABSTRACT – Traditionally, Stochastic Optimization deals with optimization models in which some of the data is modeled using random variables. In contrast, Learning Models are intended to capture the behavior of covariates, where the goal is to characterize the behavior of the response (random variable) to the predictors (random variables). The field of Statistical (or Machine) Learning focuses on understanding these relationships. The goal of this talk is to present a new class of composite optimization models in which the learning and optimization models live symbiotically. We will discuss several examples of such problems, and how they give rise to a rich class of problems. (This talk is based on the work of several Ph.D. students, and in particular Yunxiao Deng, Junyi Liu and Shuotao Diao).



Dr. Suvrajeet Sen

Professor
Department of Industrial & Systems
Engineering
University of Southern California

SPEAKER BIO – Suvrajeet Sen is Professor at the Daniel J. Epstein Department of Industrial and Systems Engineering at the University of Southern California. Prior to joining USC, he was a Professor at Ohio State University and University of Arizona. He has also served as the Program Director of OR as well as Service Enterprise Systems at the National Science Foundation. Professor Sen's research is devoted to many categories of optimization models, and he has published over a hundred papers, with the vast majority of them dealing with models, algorithms and applications of Stochastic Programming problems. He has served on several editorial boards, including *Operations Research* as Area Editor for Optimization and as Associate Editor for *INFORMS Journal on Computing*, *Journal of Telecommunications Systems*, *Mathematical Programming B*, and *Operations Research*. He also serves as an Advisory Editor for several newer journals and an Associate Editor of *INFORMS J. on Optimization*. Professor Sen was instrumental in founding the INFORMS Optimization Society in 1995, and has also served as its Chair (2015-16). Except for his years at NSF, he has received continuous extramural research funding from NSF and other basic research agencies, totaling over ten million dollars as PI over the past 25 years. In 2015, this research and his group's contributions were recognized by the INFORMS Computing Society for seminal work on Stochastic Mixed-Integer Programming. Professor Sen is a Fellow of INFORMS.

USC Viterbi
School of Engineering
*Daniel J. Epstein Department of
Industrial and Systems Engineering*

TUESDAY, AUGUST 28, 2018

3:30PM – 4:50PM

USC ANDRUS GERONTOLOGY CENTER (GER), Room 206