DANIEL J. EPSTEIN DEPARTMENT OF INDUSTRIAL AND SYSTEMS ENGINEERING

EPSTEIN INSTITUTE SEMINAR • ISE 651 SEMINAR

Fallacies of Certainty in Operational Decision Models

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ABSTRACT:

For most practitioners in government and industry, uncertainty is a fact of life. Yet, decision aids for many operational questions set aside uncertainty because they are supposedly difficult to either model, or solve, or both. Drawing upon several industrial applications (network planning, inventory control etc.) we will demonstrate that the state-of-the-art for including uncertainty in decision models has come a long way. We will present the case that the boom in business analytics, coupled with algorithmic advances in stochastic programming provide a unique opportunity for models that provide better support for operational decisions under uncertainty.

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Suvrajeet Sen (Biosketch)

Suvrajeet Sen is a Professor at the Daniel J. Epstein Department of Industrial and Systems Engineering at the University of Southern California. Until recently, he was Professor of Integrated Systems Engineering at the Ohio State University where he also served as the Director of the Center for Energy, Sustainability, and the Environment, and led the Data Driven Decisions Lab. Over the years, Professor Sen has held several positions, including stops at University of Arizona, and National Science Foundation.

Professor Sen is a Fellow of INFORMS. He has served on the editorial board of several journals, including *Operations Research* as Area Editor for Optimization, and as Associate Editor for *INFORMS Journal on Computing*, and *Journal of Telecommunications Systems*, and an Advisory Editor for several newer journals. Professor Sen founded the INFORMS Optimization Section.