

Department of Mathematical Sciences
The Johns Hopkins University

SEMINAR

Survajeet Sen
Department of Systems & Industrial Engineering
University of Arizona

October 31, 2002
304 Whitehead Hall
PRESEMINAR: 3:00 p.m.
Refreshments: 3:30 p.m.
Seminar: 4:00 p.m.

**A SCENARIO GENERATION ALGORITHM
FOR MULTISTAGE STOCHASTIC LPs**

ABSTRACT

Multistage Stochastic Programs arise in a variety of applications, especially in areas such as computational finance, transportation, logistics and many more. We consider multistage stochastic linear programs (MSLPs) in which the right-hand side depends on continuous random variables. Such problems are infinite-dimensional optimization problems. We devise an algorithm in which the original random variables are successively discretized, and a succession of discretized MSLPs are solved. Because discretization proceeds in an adaptive manner, the sizes of the resulting aggregations remain reasonable, and furthermore, the method terminates with a discretization that can be useful for policy-making and sensitivity analysis.

(This is joint work with Michael Casey, University of Puget Sound.)