INDUSTRIAL ENGINEERING AND OPERATIONS RESEARCH
PRESENTS
IEOR MONDAY SEMINAR

April 7, 2008

3:30 - 4:30 P.M.

3108 ETCHEVERRY HALL

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Models for the National Airspace System Infrastructure Availability and Effectiveness

Abstract:

Commercial air transportation in the United States National Airspace System (NAS) moves more than 600 million passengers on nearly 10 million flights annually, and is dependent on an underlying infrastructure of facilities and services for air traffic management and communications. This infrastructure represents one of the largest integrated civil systems in the world. It consists of tens of thousands of facilities and services geographically dispersed throughout the contiguous United States, Alaska, Hawaii, commonwealths, and territories from the Caribbean Sea to the South Pacific Ocean.

The Next Generation Air Transportation System (NextGen) is the third generation of national aviation plans. The first generation began shortly after the 1956 mid-air collision over the Grand Canyon, and built the current en-route and terminal airspace systems. The second generation, after the 1981 air traffic controller strike, led to the modernization of the NAS through the National Airspace System Plan. The third generation, NextGen, should transform the US and global air transportation system to meet the transportation and economic needs of the future.

In this talk we discuss (1) current and future NAS infrastructure problems and challenges, (2) availability, capacity and effectiveness of airport and terminal airspace systems, and (3) impacts of convective weather on NAS equipment outages. We address the challenges of formulating and determining availability,

capacity and effectiveness of the NAS and ways to improve these measures of performance in the NextGen environment.

REFRESHMENTS SERVED AT 3:00 PM - 3108 ETCHEVERRY HALL