

NYU Stern School of Business
Department of Information, Operations & Management Sciences
OPERATIONS MANAGEMENT RESEARCH SEMINAR

TOPIC: On Improving Operating Room Schedules

SPEAKER: Diwakar Gupta (UMN)

DATE: Wednesday, November 6th, 2013

TIME: 11:00 AM-12:00PM

PLACE: KMC 5-75

ABSTRACT

This talk will focus on improving Operating Rooms' efficiency by rescheduling advance-booked surgeries. We formulate the rescheduling problem as a variant of the bin-packing problem with constraints that prevent same-doctor-surgeries' overlap. We then identify certain features of doctors who perform multiple procedures to obtain bounds on the number of ORs needed. The bounds are used in a branch-and-bound algorithm, which when tested on multiple hospitals' data shows potential for significant savings.

Bio

Diwakar Gupta is a Professor of Industrial & Systems Engineering at the University of Minnesota. He is also an affiliate senior member of the Health Services Research, Policy, and Administration Division of the School of Public Health and a Faculty Scholar of the Center for Transportation Studies. Diwakar received a Ph.D. in Management Sciences from the University of Waterloo. His research focuses on healthcare delivery systems, state transportation agencies' operations, and supply chain and revenue management. Diwakar's research has been funded by a variety of federal and state agencies (e.g. Department of Health and Human Services, National Science Foundation, and Veterans Administration), as well as industry sponsors. His papers have appeared in all major journals in the field of Operations Research/Management and several of his papers have won best paper awards. Diwakar has held a variety of editorial appointments, including co-editor-in-chief of the Flexible Services and Manufacturing journal and Departmental Editor of Supply Chain Management and Healthcare and Policy departments of IIE Transactions. More information about his research projects can be found by visiting the web page of his research lab – Supply Chain and Operations Research Laboratory – at www.isye.umn.edu/labs/scorlab.