Prof Dr Sunderesh S. Heragu, a well known professor in logistics, supply chain management and distribution area is delivering a seminar.

DETERMINISTIC AND STOCHASTIC MODELS FOR MANUFACTURING, WAREHOUSING AND HEALTH CARE SYSTEMS

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Abstract

In the first part of this talk, we present deterministic and stochastic models as well as optimal and heuristic algorithms developed for problems arising in manufacturing and warehousing systems. We discuss in more detail a semi-open queuing network model for analyzing manufacturing and service systems in which an incoming customer must be paired with another resource and the two travel together until the last stage of service is completed for the customer.

In the second part of the talk, we present ongoing research for problems arising in healthcare systems. We present facility location, routing and resource allocation models that can be used by personnel in the healthcare and public health (HPH) and emergency service sectors (ESS) during normal and medical surge conditions. These models utilize real-time data obtained from multiple sources to provide real-time decisions that can be used by HPH and ESS coordinators in a medical emergency.
Sunderesh S. Heragu is Professor and the Mary Lee and George F. Duthie Chair in Engineering Logistics in the Industrial Engineering department at the University of Louisville. He is also Director of the Logistics and Distribution Institute (LoDI) at the University of Louisville. Previously he was Professor of Decision Sciences and Engineering Systems at Rensselaer Polytechnic Institute. He has taught at State University of New York, Plattsburgh and held visiting appointments at State University of New York, Buffalo, Technical University of Eindhoven and University of Twente, in the Netherlands, and IBM’s Thomas J Watson Research Center in Yorktown Heights, NY.

His current research interests are in the development of real-time decision support systems for emergency preparedness for the healthcare and public health and emergency service sectors, modeling and analysis of drive-through mass vaccination clinic, supply chain management, design of next generation factory layouts, intelligent agent modeling of automated warehouse systems, application of RFID technology to improve intra-plant and inter-plant logistics, and integration of design and planning activities in advanced logistical systems.

He is author of a book titled Facilities Design (currently in its third edition) and has authored or co-authored over two hundred articles. Dr. Heragu is a Fellow of the Institute of Industrial Engineers (IIE). He has received IIE’s David F Baker Distinguished Research award which recognizes outstanding research in the profession and is given for a career of accomplishments that has broadly benefitted practitioners, organizations, or other researchers, Award for Technical Innovation in Industrial Engineering for significant and innovative contributions to the industrial engineering profession, the New York State and United University Professions New Faculty Development Award - a campus-wide award at SUNY-Plattsburgh, the IIE Transactions on Design and Manufacturing Award and IIE Transactions Award for Best Paper published in “Feature Applications” for a paper co-authored with his student, and the Gold Award of Excellence for leadership in Facilities Planning and Design.