

Industrial and Systems Engineering Seminar

Applications of Operations Research and Analytics at Mayo Clinic

Wednesday, April 24

3:15 PM – Refreshments before the Seminar

3:30 PM – Graduate Seminar

Mechanical Engineering Room 4125 A & B



Professor Tom Rohleder

Professor of Health Care Systems Engineering

Mayo Clinic

Mayo Clinic has a long history of applying systems and management engineering along with advanced analytics to enable its strategic and operational priorities. The recently created Healthcare Systems Engineering Program that is part of Mayo Clinic's Center for the Science of Healthcare Delivery is an initiative to enhance creating and implementing practices that will lead to high value, patient-centric care. My presentation will discuss how the engineering history and culture of transformation at Mayo Clinic integrates the use of operations research and systems engineering to address particularly challenging problems. Most of the presentation will focus on an applied application of simulation and mathematical programming to optimize case scheduling for spine surgeries at Mayo Clinic. Results of a pilot implementation the approach will also be discussed.

Dr. Rohleder is a Professor of Health Care Systems Engineering at Mayo Clinic where he joined the Division of Health Care Policy and Research at the Mayo Clinic in 2009. Before coming to Mayo Clinic, he spent 18 years at the University of Calgary, as a Professor of Operations Management. In 2011, Dr. Rohleder was appointed as Associate Scientific-Director of the Health Care Systems Engineering Program in the newly formed Center for the Science of Health Care Delivery at Mayo Clinic. He has a Ph.D. in Business Administration, and B.S.B. in Finance from the University of Minnesota. Before obtaining his doctorate, Dr. Rohleder worked in the financial services sector for ITT and Northwestern National Life Insurance. He has over 40 publications in respected academic journals such as the Journal of Operations Management, Production and Operations Management, and Health Care Management Science. While at the University of Calgary, Dr. Rohleder garnered several research and teaching awards and served as the Associate Dean Research for the business school from 2005-2009. He also co-founded the Healthcare Operational Excellence (HOPE) Lab at the University of Calgary.