



## Brian Denton “Operations Research in Medicine: Past, Present and Future ”

**Monday September 15, 2014, 4:30-6:30PM in 1123 LBME**

Operations Research (OR) methods such as decision analysis, simulation, stochastic models, and optimization, have a long history of use for research and practice in medicine over the last several decades. Applications include cancer screening, diabetes treatment, glaucoma monitoring, organ transplants, and many others. In this talk I will discuss some of the ways OR has had an impact on medicine in the past, drawing on several specific examples in the area of chronic diseases. I will also discuss some contemporary applications, to providing specific examples of OR models, and discuss the opportunities these problems present for developing new OR methods. Finally, I will conclude by summarizing some of the exciting new directions that are on the horizon including personalized medicine, new biomarkers for early detection of diseases, and the development of artificial and regenerated organs.

**Dr. Brian Denton** is an Associate Professor in the Department of Industrial and Operations Engineering at University of Michigan, in Ann Arbor, MI. Previously he has been an Associate Professor in the Department of Industrial & Systems Engineering at NC State University, a Senior Associate Consultant at Mayo Clinic, and a Senior Engineer at IBM. He is past president of the INFORMS Health Applications Section and he is currently serving as Secretary of INFORMS. His primary research interests are in optimization under uncertainty and applications to health care delivery and medical decision making. He completed his Ph.D. in Management Science at McMaster University, his M.Sc. in Physics at York University, and his B.Sc. in Chemistry and Physics at McMaster University in Hamilton, Ontario, Canada.

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For additional information and to be added to the weekly e-mail for the series, please contact [genehkim@umich.edu](mailto:genehkim@umich.edu)