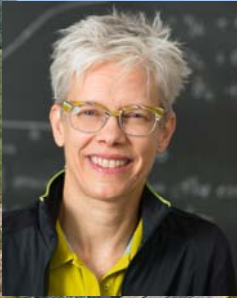


Susan A. Murphy, PhD



Learning Treatment Policies in Mobile Health

Monday
October 26, 2015
4:30PM
in 1123 LBME

A sequence of steps that facilitates effective learning of treatment policies in mobile health will be described. These include a clinical trial with associated sample size calculator and data analytic methods. An off-policy Actor-Critic algorithm is developed for learning a treatment policy from this clinical trial data. Open problems abound in this area, including the development of a variety of online predictors of risk of health problems, missing data and disengagement.

Susan Murphy's research focuses on improving sequential, individualized, decision making in health, in particular on clinical trial design and data analysis to inform the development of adaptive interventions (e.g. treatment policies). She developed trial designs which have been and are being used by clinical researchers to develop treatment policies across health (e.g., depression, alcoholism, treatment of ADHD, substance abuse, HIV treatment, obesity, diabetes, and autism). She currently works, as part of interdisciplinary teams, to develop clinical trial designs and learning algorithms in mobile health. She is a Fellow of the College on Problems in Drug Dependence, a former editor of the Annals of Statistics, President-Elect of the Bernoulli Society, a member of the US National Academy of Medicine and a 2013 MacArthur Fellow.

The seminar series "Providing Better Healthcare through Systems Engineering" is presented by the U-M Center for Healthcare Engineering and Patient Safety: Our mission is to improve the safety and quality of healthcare delivery through a multi-disciplinary, systems-engineering approach.

For additional information and to be added to the weekly e-mail for the series, please contact genehkim@umich.edu