

## IE Decision Systems Engineering Fall '20 Seminar Series in Collaboration with LIONS Seminar Series

<https://sites.google.com/view/lionseminar/>

Friday, November 6 | 1:00-2:00PM | ZOOM <https://asu.zoom.us/j/96027476295>

# “Practical Solutions to Internet Experimentation with High-Dimensional Action Spaces Using Bayesian Optimization”

## Eytan Bakshy

Ph.D in Information  
from the University  
of Michigan



## Biography

**Eytan Bakshy** is a principal scientist at Facebook, where he leads the Adaptive Experimentation team. Eytan's work focuses on developing robust, general-purpose methods for sequential decision making under uncertainty, and applying these methods broadly across Facebook and sister companies. His interests include Bayesian optimization, Bayesian machine learning, causal inference, and reinforcement learning. Eytan holds a Ph.D. in Information from the University of Michigan, and a B.S. in Mathematics and Computer Science from the University of Illinois in Urbana-Champaign.

## Abstract

Rapid progress in deep reinforcement learning has produced stunning achievements in controlled environments, yet many challenges arise when attempting to apply such methods to real-world problems. Using examples from Facebook, I will discuss several problems faced by practitioners who aim to apply RL to their own situations. These include issues with problem specification, safety, off-policy evaluation, deployment, and human factors. I will present recent work on Bayesian optimization at Facebook which address these concerns, including experimenting in noisy non-stationary environments, multi-objective optimization, combining simulation and real-world experiments, and contextual policy search.

Hosted by: Giulia Pedrielli