Daniel Russo

mobile +1-978-660-6221
daniel.russo@kellogg.northwestern.edu
http://djrusso.github.io/

Education

2011 - 2015 **Stanford University**, *Stanford, CA.*
PhD in Management Science and Engineering
Concentration area: Operations Research
Advisor: Benjamin Van Roy

2007 - 2011 **University of Michigan**, *Ann Arbor, MI.*
Bachelor of Science in Economics (*with highest honors*) and Mathematics (*with honors*)

Employment

Since 2016 **Kellogg School of Management, Northwestern University**, *Evanston, IL.*
Assistant Professor of Managerial Economics and Decision Sciences

2015-2016 **Microsoft Research**, *Cambridge, MA.*
Postdoctoral Research Scientist

2013 **oDesk (now Upwork)**, *Redwood City, CA.*
Research Intern
Worked on automated skills testing system to evaluate hundreds of thousands of candidates in oDesk's internet labor market. Developed algorithm for adaptively serving questions to users and a method for scoring tests.

2011 **Charles River Associates**, *Boston, MA.*
Summer Analyst – Competition and Antitrust practice

Research Interests

Topics in sequential decision-making under uncertainty and statistical machine learning, including online optimization, sequential design of experiments, multi-armed bandits, reinforcement learning, and ranking and selection.

Publications

- D. Russo, *Simple Bayesian Algorithms for Best Arm Identification.*
  - First place, INFORMS 2016 JFIG paper competition.
  - Journal version in submission.
  - Preliminary version appeared in Conference on Learning Theory (COLT), 2016
- D. Russo and J. Zou, *Controlling Bias from Data Exploration via Information Usage.*
  - Journal version in submission.
  - Preliminary version appeared in Artificial Intelligence and Statistics (AISTATS), 2016. [Full oral presentation; top 7% of submissions]
- D. Russo and B. Van Roy, *Learning to Optimize via Information-Directed Sampling.* Second round R&R at Operations Research.
  - First place, INFORMS George Nicholson 2014 student paper competition.
  - Preliminary version appeared in Advances in Neural Information Processing Systems (NIPS), 2014

- D. Russo and B. Van Roy, *An Information Theoretic Analysis of Thompson Sampling.* Journal of Machine Learning Research Vol. 17, pp. 1-30, 2016.
- D. Russo and B. Van Roy, *Learning to Optimize via Posterior Sampling.* Mathematics of Operations Research. Vol. 39, No. 4, pp. 1221-1243, 2014.
- D. Russo and B. Van Roy, *Eluder Dimension and the Sample Complexity of Optimistic Exploration.* Advances in Neural Information Processing Systems (NIPS), 2013. [Full oral presentation; top 1.4% of submissions]
- I. Osband, D. Russo and B. Van Roy, *(More) Efficient Reinforcement Learning Via Posterior Sampling.* Advances in Neural Information Processing Systems (NIPS), 2013. [25% acceptance rate]
- N. Arnosti and D. Russo, *Welfare-Improving Cascades and the Effect of Noisy Reviews.* Workshop on Internet & Network Economics (WINE), 2013. [24% acceptance rate]

Honors and Awards

- First place in INFORMS 2016 JFIG paper competition
- First place in INFORMS George Nicholson 2014 student paper competition
- Accel Fellowship 2014-2015
- Stanford Graduate Fellowship 2011-2014
- University of Michigan 2011 Ferrando Honors Prize:
  - "*Awarded annually to the best senior pursuing honors in Economics*".

Invited Talks

2016 National University of Singapore - Decision Sciences department; Google Deep Mind; Uber Data Science; Stanford RL Forum;

2015 Duke Decision Sciences; Microsoft Research New York; Chulalongkorn University; Stanford GSB; Harvard SEAS; Michigan IOE; Georgia Tech ISYE; Chicago Booth; USC Marshall; UT Austin ECE; Microsoft Research New England; Columbia IEOR; Columbia DRO; NYU Stern;

2014 Kellogg School of Management; Microsoft Research Redmond; Stanford Information Theory Forum; Allerton Conference–invited session showcasing the "Class of 2014"; NIPS Bayesian Optimization Workshop - speaker and panelist;

2013 NIPS Oral Presentation

Professional Service

- Reviewer for:
  - *Academic Journals*: Operations Research; Management Science; Journal of Machine Learning Research; Stochastic Systems; Electronic Journal of Statistics; Journal of Applied Probability; Computational Optimization and Applications;
  - *Machine Learning Conferences:* NIPS; ICML; COLT; ALT; AISTATS;