Bradley Sturt

PERSONAL

Name: Bradley Eli Sturt
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RESEARCH INTERESTS

Optimization under uncertainty (stochastic, robust, dynamic) and machine learning, with applications in operations, business analytics, and finance.

ACADEMIC EMPLOYMENT

University of Illinois at Chicago, Chicago, IL
Assistant Professor of Business Analytics — *2020 - Present*

EDUCATION

Massachusetts Institute of Technology, Cambridge, MA — *2015 - 2020*
Ph.D. in Operations Research
GPA: 5.00/5.00

University of Illinois Urbana Champaign, Champaign, IL — *2010 - 2014*
B.S. in Computer Engineering, minor in Technology and Management
GPA: 3.97/4.00

PH.D THESIS

"Dynamic Optimization in the Age of Big Data," MIT, April 2020.

AWARDS (SELECTED)

MIT Operations Research Center Student Paper Competition, First Place, 2019

Awarded to one paper written by students each year in the MIT ORC PhD Program, recognizing outstanding achievement in operations research. Awarded for paper "*A data-driven approach to multi-stage stochastic linear optimization*", with D. Bertsimas and S. Shtern.

MIT Sloan Outstanding Teaching Assistant Award, 2017

Awarded to one graduate student in the MIT Sloan School of Management each academic year for excellence in MBA teaching. Nominated and selected by MBA students as a teaching assistant in Fall 2016 for the class "*15.060: Data, Models and Decisions*".

INFORMS George Nicholson Student Paper Competition, Second Place, 2017

The competition is held each year to honor outstanding papers in the field of operations research and the management sciences written by a student. Awarded for paper "*Computation of the bootstrap: complexity, exact algorithms and deterministic approximations*" with D. Bertsimas.

Research

Journal Papers

1. Two-stage sample robust optimization
   Operations Research, forthcoming, 2020
   D. Bertsimas, S. Shtern, and B. Sturt

2. Computation of exact bootstrap confidence intervals: Complexity and deterministic algorithms
   Operations Research, Vol. 68, No. 3, pp. 949-964, 2020
   D. Bertsimas and B. Sturt
   INFORMS George Nicholson Student Paper Competition (2nd Place), 2017

3. The path most traveled: Travel demand estimation using big data resources
   Transportation Research Part C: Emerging Technologies, Vol. 58, pp.162-177, 2015
   J. Toole, S. Colak, B. Sturt, L. Alexander, A. Evsukoff, and M. C. González

Completed Papers

4. A data-driven approach to multi-stage stochastic linear optimization
   Major revision at **Management Science** (2nd round)
   D. Bertsimas, S. Shtern, and B. Sturt
   MIT Operations Research Center Student Paper Competition (1st Place), 2019

5. Dynamic optimization with side information
   D. Bertsimas, C. McCord, and B. Sturt

Peer-Reviewed Conference Papers

6. Personalized entity recommendation in heterogeneous information networks with implicit user feedback
   Proceedings of the 7th ACM International Conference on Web Search and Data Mining, pp. 283-292, 2014
   X. Yu, X. Ren, Y. Sun, Q. Gu, B. Sturt, U. Khandelwal, B. Norick, and J. Han

7. HeteRec: Entity recommendation in heterogeneous information networks with implicit user feedback
   Proceedings of the 7th ACM Conference on Recommender Systems, pp. 347-350, 2013.
   X. Yu, X. Ren, Y. Sun, B. Sturt, U. Khandelwal, Q. Gu, B. Norick, and J. Han

In Preparation (For Journal Submission)

8. A nonparametric algorithm for optimal stopping based on robust optimization

9. Optimal negative experimentation (with D. Freund)

Teaching

Massachusetts Institute of Technology, Teaching Assistant

15.097, Robust Optimization (TA Evaluation Score: **6.5/7.0**)	*Spring 2019*
15.778, Intro. to Operations Management (TA Evaluation Score: **6.7/7.0**)	*Summer 2018*
15.093, Optimization Methods (TA Evaluation Score: **7.0/7.0**)	*Fall 2017*
15.060, Data Models and Decisions (TA Evaluation Score: **6.7/7.0**)	*Fall 2016*

Service

Journal Reviewer

Management Science, Operations Research, Mathematics of Operations Research, SIAM Journal on Optimization, Production and Operations Management, INFORMS Journal on Optimization

Organizer of 15.S60: Computation in Optimization and Statistics, 2017, 2018, 2019

Organized student-taught MIT Sloan elective course during the January term on software tools for operations research (R, Julia, Gurobi, distributed computing). Recruited and coordinated team of teaching assistants, defined course expectations, and managed enrollment.

Coordinator for MIT ORC Fall Seminar Series, 2018

Invited and hosted speakers as student coordinator for Fall seminar series.

Invited Talks

A Data-Driven Approach to Multi-Stage Stochastic Linear Optimization

University of Wisconsin Madison, Industrial and Systems Engineering	*January 2020*
University of Michigan, Industrial and Operations Engineering	*December 2019*
Indiana University, Kelley School of Business	*December 2019*
University of Illinois at Chicago, College of Business Administration	*December 2019*
Princeton University, Operations Research and Financial Engineering	*November 2019*
University of Illinois Urbana-Champaign, Gies College of Business	*November 2019*
Oracle Labs (USA East Office), ML Research Seminar Series	*November 2019*
MIT Operations Research Center, ORC Seminar	*September 2019*
Technion Industrial Engineering, Quant Seminar	*January 2019*
BIRS Workshop on "Models and Algorithms for Sequential Decision-Making under Uncertainty", Banff	*January 2019*
International Symposium on Mathematical Programming (ISMP), Bordeaux	*August 2018*

Dynamic Optimization with Side Information

CMU Tepper School of Business, YinzOR Conference	*August 2019*
International Conference on Continuous Optimization (ICCOPT), Berlin	*August, 2019*

Computation of Exact Bootstrap Confidence Intervals

INFORMS George Nicholson Competition Finalist Session, Houston	*November 2017*

Industry Employment

Facebook, Menlo Park, CA *Data Scientist Intern*	*Summer 2015*
Google, Mountain View, CA *Software Engineering Intern*	*Summer 2013*
Garmin, Olathe, KS *Software Engineering Intern*	*Summer 2012*

Computing

R, Python, Julia, C++, x86 Assembly

Last updated

November 23, 2020