Bradley Sturt

PERSONAL

Name: Bradley Eli Sturt
Birthday: October 1991
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RESEARCH INTERESTS

Methodology: Optimization under uncertainty (robust, stochastic, dynamic) and prescriptive analytics
Applications: Revenue management, public policy, finance, supply chain management

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.

SELECTED AWARDS

INFORMS Junior Faculty Interest Group (JFIG) Paper Competition, Second Place, 2021

The competition is held each year to encourage research among junior faculty and to increase the visibility of research conducted by junior faculty within the fields of operations research and management science. Awarded for solo-author paper titled "A nonparametric algorithm for optimal stopping based on robust optimization".

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 titled "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 titled "Computation of the bootstrap: complexity, exact algorithms and deterministic approximations" with D. Bertsimas.

Research

* Author names are listed in alphabetical order

Under Review

1. Group fairness in dynamic refugee assignment
   D. Freund, T. Lykouris, E. Paulson, B. Sturt, and W. Weng*

2. On the sparsity of optimal linear decision rules in robust inventory management
   H. Lu and B. Sturt*
   Management Science (invited for first round revision - major revision)

3. The value of robust assortment optimization under ranking-based choice models
   B. Sturt
   Management Science (invited for first round revision - major revision)

4. A nonparametric algorithm for optimal stopping based on robust optimization
   B. Sturt
   Operations Research (invited for second round revision - minor revision)
   - 2nd Place in the INFORMS Junior Faculty Interest Group (JFIG) Paper Competition, 2021

Journal Papers

5. Dynamic optimization with side information
   D. Bertsimas, C. McCord, and B. Sturt*
   European Journal of Operational Research, Vol. 304, No. 2, pp. 634-651, 2023

6. A data-driven approach to multi-stage stochastic linear optimization
   D. Bertsimas, S. Shtern, and B. Sturt*
   Management Science, Vol. 69, No. 1, pp. 51-74, 2023
   - Winner of the MIT Operations Research Center Student Paper Competition, 2019

7. Two-stage sample robust optimization
   D. Bertsimas, S. Shtern, and B. Sturt*
   Operations Research, Vol. 70, No. 1, pp. 624-640, 2022

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

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

Peer Reviewed Conference Papers

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

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

In Progress

12. Robust optimization and the security of election voting machines
B. Crimmins, J. Halderman, and B. Sturt*

13. Approximation algorithms for robust dynamic pricing with strategic customers
Z. Chen, B. Sturt, and W. Xie*

Invited Talks and Conferences

Seminars & Workshops	Northwestern University, Industrial Engineering and Management Science	*September 2022*
	Virginia Tech, Industrial and Systems Engineering	*May 2022*
	University of Texas Austin, Operations Research and Industrial Engineering	*November 2021*
	Washington University in St. Louis, Olin Business School	*November 2021*
	Robust Optimization Webinar	*November 2020*
	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*
	CMU Tepper School of Business, YinzOR Workshop	*August 2019*
	Technion Industrial Engineering, Quant Seminar	*January 2019*
	BIRS Workshop on "Models and Algorithms for Sequential Decision-Making under Uncertainty", Banff	*January 2019*
Conferences	INFORMS Annual Meeting, Indianapolis	*October 2022*
	INFORMS Revenue Management and Pricing (RMP) Section Conference, Virtual	*June 2022*
	INFORMS Annual Meeting, Virtual	*October 2021*
	SIAM Conference on Optimization (OP21), Virtual	*July 2021*
	INFORMS Annual Meeting, Virtual	*October 2020*
	International Conference on Continuous Optimization (ICCOPT), Berlin	*August, 2019*
	INFORMS Annual Meeting, Seattle	*October 2019*
	INFORMS Annual Meeting, Phoenix	*November 2018*
	International Symposium on Mathematical Programming (ISMP), Bordeaux	*August 2018*
	INFORMS Annual Meeting, Houston	*October 2017*

Service

Ad-hoc Reviewer Management Science, Operations Research, Mathematics of Operations Research, Manufacturing & Service Operations Management, SIAM Journal on Optimization, Mathematical Programming, Production and Operations Management, INFORMS Journal on Optimization, INFORMS Journal on Computing, Israel Science Foundation (ISF)

Teaching

Instructor

University of Illinois at Chicago

IDS 516, Data Analytics for Business Professionals (Instructor Evaluation: **4.80/5**)	*Fall 2022*
IDS 270, Statistics I for Business Scholars (Instructor Evaluation: **4.19/5**)	*Fall 2022*
IDS 472, Business Data Mining (Instructor Evaluation: **4.77/5**)	*Spring 2022*
IDS 516, Data Analytics for Business Professionals (Instructor Evaluation: **4.75/5**)	*Fall 2021*
IDS 270, Statistics I for Business Scholars (Instructor Evaluation: **3.63/5**)	*Fall 2021*
IDS 472, Business Data Mining (Instructor Evaluation: **4.61/5**)	*Spring 2021*
IDS 270, Statistics I for Business Scholars (Instructor Evaluation: **4.38/5**)	*Fall 2020*

Massachusetts Institute of Technology

15.S60, Computation in Optimization and Statistics	*January 2017, 2018, 2019*

Teaching Assistant

Massachusetts Institute of Technology

15.097, Robust Optimization (TA Evaluation: **6.5/7**)	*Spring 2019*
15.778, Introduction to Operations Management (TA Evaluation: **6.7/7**)	*Summer 2018*
15.093, Optimization Methods (TA Evaluation: **7.0/7**)	*Fall 2017*
15.060, Data Models and Decisions (TA Evaluation: **6.7/7**)	*Fall 2016*

Industry and Computing

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 January 27, 2023