

ARTHUR DELARUE

Darden School of Business
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EXPERIENCE

University of Virginia, Darden School of Business, Charlottesville, VA

Assistant Professor 2025 – Present

Georgia Institute of Technology, Stewart School of Industrial and Systems Engineering, Atlanta, GA

Gary C. Butler Faculty Fellow 2024 – 2025

Assistant Professor 2022 – 2025

Lyft, Inc, Cambridge, MA

Postdoctoral Fellow 2021 – 2022

EDUCATION

Massachusetts Institute of Technology, Cambridge, MA

Ph.D. Operations Research 2021

S.B. Physics and Mathematics 2016

RESEARCH INTERESTS

Optimization and machine learning in marketplaces, experiments, transportation, public sector.

PUBLICATIONS

- Algorithmic Precision and Human Decision: A Study of Interactive Optimization for School Schedules (with Z. Lian, S. Martin). **Management Science** 72(1):148-166 (2025).
 - Early versions accepted to MSOM Sustainable Operations SIG (2023), ACM Conference on Economics and Computation (2024).
- Adaptive Optimization for Prediction with Missing Data (with D. Bertsimas, J. Pauphilet). **Machine Learning** 114, 124 (2025).
- Reducing Marketplace Interference Bias Via Shadow Prices (with I. Bright, I. Lobel). **Management Science** 71(8), 7094-7112 (2025).
 - Early version accepted to ACM Conference on Economics and Computation (2023).
- Simple Imputation Rules for Prediction with Missing Data: Theoretical Guarantees vs. Empirical Performance (with D. Bertsimas, J. Pauphilet). **Transactions on Machine Learning Research** (2024).
- Policy Analytics in Public School Operations (with D. Bertsimas). **Operations Research** 71(1):289-313 (2023).
- Course Scheduling Under Sudden Scarcity: Applications to Pandemic Planning (with C. Barnhart, D. Bertsimas, J. Yan). **Manufacturing & Service Operations Management** 24(2):727-745 (2022).
- From Predictions to Prescriptions: A Data-Driven Response to COVID-19 (with D. Bertsimas et al.). **Health Care Management Science** 24, 253-272 (2021).

8. Reinforcement Learning with Combinatorial Actions: Application to Vehicle Routing (with R. Anderson, C. Tjandraatmadja). In **Advances in Neural Information Processing Systems** (2020).
9. Bus Routing Optimization Helps Boston Public Schools Design Better Policies (with D. Bertsimas, W. Eger, J. Hanlon, S. Martin). **INFORMS Journal of Applied Analytics** 50(1): 39-47 (2020).
10. Optimizing Schools' Start Time and Bus Routes (with D. Bertsimas, S. Martin). **Proceedings of the National Academy of Sciences** 116(13): 5943-5948 (2019).
11. Travel Time Estimation in the Age of Big Data (with D. Bertsimas, P. Jaillet, S. Martin). **Operations Research** 67(2): 498-515 (2019).

COMPLETED WORK

12. Data-Driven Police Staffing (with W. Xu). Submitted (2025).
13. Microtransit design: fixed, flexible, or both? (with A. Jacquillat, S. Karam, J. Yan). Submitted (2025).
14. Pricing Experiments in Matching Marketplaces under Interference: Designs and Estimators (with K. Karakolios). Submitted (2025).
15. Solving the Quadratic Assignment Problem using Deep Reinforcement Learning (with P.S. Bagga). arXiv: 2310.01604.
16. The Price of Interpretability (with D. Bertsimas, P. Jaillet, S. Martin). arXiv: 1907.03419.

IN PREPARATION

17. Heterogeneous Treatment Effects Under Marketplace Interference (with K. Karakolios).
18. Learning Competition Status with Small Samples in Gig Economy Platforms (with Z. Lian, T. Qin).
19. Designing Fair and Efficient School Transportation Eligibility Rules (with S. Martin, O. Phillips).

AWARDS AND HONORS

Research

INFORMS Wagner Prize (Semi-Finalist)	2024
INFORMS Data Mining Section Best Paper (Finalist)	2021
Pierskalla Award, INFORMS Health Applications Society (Winner)	2020
INFORMS Data Mining Section Best Student Paper (Finalist)	2019
INFORMS Franz Edelman Laureate	2019
MIT LIDS Student Conference Best Presentation (Runner-up)	2019
INFORMS Doing Good With Good OR Competition (Runner-up)	2018
MIT Operations Research Center Best Student Paper (Winner)	2018
Boston Public Schools Transportation Challenge (Winner)	2017
William Asbjornsen Albert Memorial Fellowship	2016
Zeno Karl Schindler Foundation Research Grant	2014
Third prize in Latin, Concours Général des Lycées ¹	2011

Teaching

Georgia Tech Student Recognition of Excellence in Teaching: CIOS Honor Roll	2022, 2023, 2024
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¹ National competition for French high schools across all subjects.

Service

Georgia Tech ISyE Inclusion Fellow	2023
MIT William L Stewart Jr. Award	2020

Advisee awards

Olivia Phillips: Gary C. Butler PhD Fellowship	2024
Kleanthis Karakolios: Onassis Foundation Fellowship	2023

TEACHING EXPERIENCE

UVA Darden School of Business, Instructor

Decision Analysis Part II (MBA core)	Spring 2026
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Georgia Institute of Technology, Instructor

ISYE 4601 Senior Design (undergraduate capstone)	Spring 2025
ISYE 6673 Financial Optimization (Master of Finance elective)	Fall 2022, 2023, 2024
ISYE 3133 Engineering Optimization (undergraduate core)	Spring 2023

MIT Sloan School of Management

15.083 Integer Optimization (PhD elective, TA)	Spring 2021
15.071 The Analytics Edge (MBA elective, TA)	Spring 2018
15.S60 Computing in Optimization and Statistics (Head Instructor)	Winter 2019, 2020, 2021
15.S41 Software Tools for Business Analytics (Session Instructor)	Winter 2018, 2020

Guest Lectures

IEOR E4418 Transportation Analytics and Logistics (Columbia IEOR)	Spring 2022
API 504 Policy Analysis for Transnational Affairs (Harvard Kennedy School)	Spring 2021
MN 4480 Supply Chain Management (Naval Postgraduate School)	Winter 2021
15.060 Data, Models, and Decisions (MIT Sloan)	Fall 2020
15.053 Optimization Methods in Business Analytics (MIT Sloan)	Spring 2019, 2020, 2021
15.071 The Analytics Edge (MIT Sloan)	Spring 2018, Fall 2019, Spring 2019

ADVISING

Graduated Students

Kleanthis Karakolios, PhD, Machine Learning, Georgia Tech	2025
Puneet S. Bagga, BS, Computer Science, Georgia Tech	2024

Former Students

Olivia Phillips, PhD student in Operations Research, Georgia Tech	2023 – 2025
Weiqing (Lynn) Xu, PhD student in Operations Research, Georgia Tech	2023 – 2025

SERVICE

INFORMS

Chair, TALENT Workshop	2027
Reviewer, MSOM Best Student Paper Competition	2025
Organizing committee member, TALENT Workshop	2025
Committee member, Transportation Science & Logistics Best Paper Prize	2024
Co-chair, INFORMS Future of OR and Analytics Workshop, Indianapolis, IN	2022
Session chair, INFORMS Annual Meeting	2020 – 2022, 2024

Georgia Institute of Technology

Member, ISyE OR Comprehensive Exam Committee	2024 – 2025
Member, ISyE Graduate Admissions Committee	2022 – 2025

Massachusetts Institute of Technology

Graduate Resident Advisor, Simmons Hall	2018 – 2021
Member, Operations Research Center Resources for Easing Friction and Stress (REFS)	2017 – 2021

Reviewer for major journals, including *Management Science*, *Operations Research*, *Manufacturing & Service Operations Management*, *Transportation Science*, *INFORMS Journal of Computing*, *Naval Research Logistics*, *Transportation Research Part B: Methodological*, *Transportation Research Part C: Emerging Technologies*, *Service Science*, *Socio-Economic Planning Sciences*, *Omega*, *IEEE Transactions on Pattern Analysis and Machine Intelligence*.

INDUSTRY EXPERIENCE

Lyft, Inc, Cambridge, MA

Postdoctoral Fellow	2021 – 2022
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Google, Cambridge, MA

Research Intern	2019
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Jane Street Capital, New York, NY

Trading Intern	2015
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SELECTED INVITED TALKS

- 2024** University of Virginia – Darden School of Business – Data Analytics and Decision Sciences
- UCL School of Management – Operations, Technology & Innovation
- Imperial College School of Business – Analytics & Operations
- Loyola University Chicago – Quinlan School of Business – Supply Chain Management
- Johns Hopkins University – Carey School of Business – Information Systems
- London Business School – Management Science & Operations
- INSEAD Paris – Technology & Operations Management
- MIT – Department of Economics – Blueprint Labs
- HEC Paris – Information Systems & Operations Management
- University of Cyprus – Business & Public Administration
- 2023** University of British Columbia – Sauder School of Business – Operations & Logistics
- 2022** Carnegie Mellon University – YinzOR Student Conference (Plenary)
- 2021** Lyft, Inc – Rideshare Labs
- Cornell Johnson School of Management – Operations, Technology & Information Management
- Columbia Business School – Decisions, Risk and Operations
- Boston University – Questrom School of Business – Operations & Technology Management
- UCLA – Anderson School of Management – Decisions, Operations & Technology Management
- 2020** Georgia Institute of Technology – Stewart School of Industrial and Systems Engineering
- Naval Postgraduate School – Operations Research
- Kellogg-Wharton Virtual Operations Management Workshop
- 2019** Center for Strategic and Budgetary Analysis – Data as a Resource Workshop
- Google Research Cambridge
- Cornell Tech – AI100 Prediction in Practice Workshop

2018 MIT – Sloan School of Management – Operations Research & Statistics
MIT – Special Seminar on Operations Research for Social Good

SKILLS AND INTERESTS

Languages: French (native), German (intermediate), Spanish (intermediate), Greek (beginner).

Software: Julia, R, Python, C++, Bash, Mathematica, Matlab, SQL.

Citizenship: USA, France

MEDIA

My work has been featured in *The Wall Street Journal*, *The Boston Globe*, *Wired*, *Popular Mechanics*, *Kellogg Insight*, and *WBUR (NPR Boston)*.