

Alexandre Jacquillat

Sloan School of Management
Massachusetts Institute of Technology
77 Massachusetts Avenue, Cambridge, MA 02139

alexjacq@mit.edu
mitmgmtfaculty.mit.edu/ajacquillat/
617-715-4848

ACADEMIC EXPERIENCE

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Sloan School of Management, Cambridge, MA
Associate Professor of Operations Research and Statistics 2023–present
Class of 1942 Career Development Assistant Professor 2021–present
Assistant Professor of Operations Research and Statistics 2019–2023

CARNEGIE MELLON UNIVERSITY, Pittsburgh, PA 2016–2019
Heinz College of Information Systems and Public Policy (primary appointment)
Tepper School of Business, Operations Management (minority appointment)
Assistant Professor of Operations Research and Public Policy

EDUCATION

PH.D., MIT, Engineering Systems Division 2015
MASTER OF SCIENCE, MIT, Technology and Policy Program 2012
MASTER OF SCIENCE, École Polytechnique, Applied Mathematics 2012

SAMPLE RESEARCH PRIZES

- Winner, INFORMS Computing Society Harvey Greenberg Research Award (2023)
- Winner, *Transportation Science* Journal Paper of the Year (2023)
- Winner, INFORMS Transportation Science & Logistics Best Paper Prize (2021)
- Winner, INFORMS Aviation Applications Section Best Paper Prize (2021)
- Winner, INFORMS Aviation Applications Section Best Paper Prize (2020)
- Winner, Pierskalla Award, INFORMS Health Applications Society (2020)
- Winner, Best Applied Paper, INFORMS Workshop on Data Mining and Decision Analytics (2020)
- Winner, INFORMS Transportation Science & Logistics Outstanding Paper, Air Transportation (2019)
- Winner, INFORMS Transportation Science & Logistics Best Paper Prize (2017)
- Winner, INFORMS George B. Dantzig Dissertation Award (2015)
- Winner, INFORMS Transportation Science & Logistics Dissertation Prize (2015)
- Winner, Milton Pikarsky Memorial Award for Best PhD Dissertation in transportation science and technology, Council of University Transportation Centers (2015)

TEACHING PRIZES

- MIT Jamieson Prize for Excellence in Teaching (2023)
- Teaching with Digital Technology Award, MIT (2020)
- Outstanding Teacher Award, MIT Sloan School of Management (2020)

OTHER HONORS AND AWARDS

- Named in list of Leading Academic Data Leaders from the Chief Data Officer Magazine (2021,2022)
- *Transportation Science* Meritorious Service Award, Associate Editor (2021)

STUDENT AWARDS

- M. Blanchard: Winner, INFORMS Transportation Science & Logistics Best Student Paper (2023)
- K. Cummings: Finalist, Dupačová-Prékopa Best Student Paper in Stochastic Programming (2023)
- K. Wei: Winner, AGIFORS Anna Valicek Award (2019)
- N. Ribeiro: Winner, AGIFORS Anna Valicek Award (2018)

SELECTED GRANTS

- Co-Principal Investigator (with Daniel Freund); MIT Mobility Initiative; Efficient, reliable and equitable deployment of urban charging infrastructure toward large-scale vehicle electrification; \$150,000; 2023–2024.
- Principal Investigator; MIT Climate & Sustainability Consortium; Logistics electrification through scalable and inter-operable charging infrastructure; \$234,784; 2022–2024.
- Principal Investigator; Singapore Defence Science and Technology Agency; Data-driven optimization under categorical uncertainty, and applications to smart city operations; \$420,000; 2021–2023.
- Principal Investigator; Wayfair; Inventory management toward high-speed delivery; \$49,774; 2021–2022.
- Co-Principal Investigator (with Cynthia Barnhart); MIT Amazon Science Hub; Fleet management and routing optimization for warehouse operations; \$650,000; 2021–2023.
- Co-Principal Investigator (with Dimitris Bertsimas); C3.AI Institute; Mitigation of COVID-19 and Future Pandemics; \$200,000; 2020–2021.
- Principal Investigator; MIT Research Support Committee; Data-driven optimization and field experimentation in networks, with applications to relay-based logistics; \$75,000; 2020–2022.
- Principal Investigator; Vueling Airlines; Data, analytics and optimization for airline planning and operations; \$71,755; 2020–2021.

OTHER PROFESSIONAL EXPERIENCE

MCKINSEY & CO., Boston, MA, Associate	2015–2016
BOOZ ALLEN HAMILTON, Boston, MA, Consultant Intern	2012
UNIVERSITÉ DE MONTRÉAL, Montreal, QC, Visiting Researcher Department of Computer Science and Operations Research	2010

TEACHING EXPERIENCE

MIT, SLOAN SCHOOL OF MANAGEMENT, Instructor <i>15.093: Optimization</i> (Fall 2022, 2023) <i>15.083: Integer Optimization</i> (Spring 2021, 2022, 2023) <i>15.072: Advanced Analytics Edge</i> (Fall 2019, 2020, 2021) <i>15.071: The Analytics Edge</i> (Fall 2019)	2019–present
MIT, Guest Lecturer <i>15.000: Explorations in Management</i>	2019–present

11.529: *Mobility Ventures*
1.200: *Transportation Systems Analysis*
6.268 *Network Science*
16.763: *Air Transportation Operations Research*

CARNEGIE MELLON UNIVERSITY, TEPPER SCHOOL OF BUSINESS, Instructor 2018–2019
70.462: *Stochastic Modeling and Simulation* (Spring 2018, Spring 2019)

CARNEGIE MELLON UNIVERSITY, HEINZ COLLEGE, Instructor 2016–2019
94.867: *Decision Analytics for Business and Policy* (Spring 2017, Spring 2018, Spring 2019)
95.760: *Decision-Making under Uncertainty* (Fall 2016, Fall 2017, Spring 2019)

PUBLISHED PAPERS

1. K. Wang, M. Aydemir and A. Jacquillat, “Scenario-based Robust Optimization for decision-making under binary uncertainty”, *INFORMS Journal on Optimization*, accepted, 2023.
[Winner, Best Applied Paper, INFORMS Workshop on Data Mining and Decision Analytics (2020)]
2. M. Blanchard, A. Jacquillat, and P. Jaillet, “Probabilistic bounds on the k-Traveling Salesman Problem and the Traveling Repairman Problem”, *Mathematics of Operations Research*, accepted, 2023.
[Winner, INFORMS Transportation Science & Logistics Best Student Paper, Moise Blanchard (2023)]
3. S. Birolini and A. Jacquillat, “Day-ahead Aircraft Routing with Data-driven Primary Delay Predictions”, *European Journal of Operational Research*, 2023, 310(1):379-396, 2023.
4. W. Zhang, A. Jacquillat, K. Wang and S. Wang, “Optimized scenario reduction: solving large-scale stochastic programs with quality guarantees”, *INFORMS Journal of Computing*, 35(4):886-908, 2023.
5. W. Zhang, A. Jacquillat, K. Wang and S. Wang, “Routing optimization with vehicle-customer coordination”, *Management Science*, 69(11):6876-6897, 2023.
[Winner, INFORMS Computing Society Harvey Greenberg Research Award (2023)]
6. M. Cohen, A. Jacquillat, J. Serpa, and M. Benborhoum, “Managing Airfares Under Competition: Insights from a Field Experiment”, *Management Science*, 69(10):6076-6108, 2023.
[Winner, Best Technical Presentation, AGIFORS Annual Symposium (2018)]
7. M. Cohen, A. Jacquillat and H. Song, “Price discrimination and inventory allocation in Bertrand competition”, *Manufacturing & Service Operations Management*, 25(1):148-167, 2023.
8. S. Birolini, A. Jacquillat, P. Schmedeman and N. Ribeiro, “Passenger-centric slot allocation at schedule-coordinated airports”, *Transportation Science*, 51(1):4-26, 2022.
9. K. Wang, A. Jacquillat, and V. Vaze, “Vertiport planning for Urban Aerial Mobility: an adaptive discretization approach”, *Manufacturing & Service Operations Management*, 24(6):3215-3235, 2022.
10. M. Cohen, A. Jacquillat, A. Ratzon and R. Sasson, “The impact of high-occupancy vehicle lanes on carpooling”, *Transportation Research Part A: Policy and Practice*, 165: 186-206, 2022.
11. A. Jacquillat, “Predictive and prescriptive analytics toward passenger-centric Ground Delay Programs”, *Transportation Science*, 56(2):265-298, 2022.
[Winner, Transportation Science Journal Paper of the Year (2023)]
12. K. Wei, V. Vaze and A. Jacquillat, “Transit planning optimization under ride-hailing competition and traffic congestion”, *Transportation Science*, 56(3):725-749, 2022.

13. A. Jacquillat, V. Vaze and W. Wang, “Primary vs. secondary infrastructure capacity allocation mechanisms”, *European Journal of Operational Research*, 303(2):668-687, 2022.
14. S. Birolini, A. Jacquillat, M. Cattaneo and A. Antunes, “Airline network planning: mixed-integer non-convex optimization with demand–supply interactions”, *Transportation Research Part B: Methodological*, 154, 100-124, 2021.
15. D. Bertsimas, V. Digalakis, A. Jacquillat, M. Li and A. Previero, “Where to locate COVID-19 mass vaccination centers?”, *Naval Research Logistics*, 69(2):179-200, 2022.
16. D. Bertsimas, L. Boussioux, R. Cory-Wright, A. Delarue, V. Digalakis, A. Jacquillat, D. Lahlou Kitane, G. Lukin, M. Li, L. Mingardi, O. Nohadani, A. Orfanoudaki, T. Papalexopoulos, I. Paskov, J. Pauphilet, O. Skali Lami, B. Stellato, H. Tazi Bouardi, K. Villalobos, H. Wiberg, C. Zeng, “From predictions to prescriptions: A data-driven response to COVID-19”, *Health Care Management Science*, 24:253–272, 2021.
[Winner, Pierskalla Award, INFORMS Health Applications Society (2020)]
17. V. Abhishek, M. Dogan and A. Jacquillat, “Strategic timing and dynamic pricing for online resource allocation”, *Management Science*, 67(8):4880-4907, 2021.
18. K. Wang and A. Jacquillat, “A Stochastic Integer programming approach to air traffic scheduling and operations”, *Operations Research*, 68(5):1375-1402, 2020.
[Winner, INFORMS Transportation Science & Logistics Best Paper Prize (2021)]
[Winner, INFORMS Aviation Applications Section Best Paper Prize (2020)]
19. J. Lee, L. Marla and A. Jacquillat, “Dynamic Disruption Management in Airline Networks Under Airport Operating Uncertainty”, *Transportation Science*, 54(4):973-997, 2020.
20. K. Wei, V. Vaze and A. Jacquillat, “Airline timetable development and fleet assignment incorporating passenger choice”, *Transportation Science*, 54(1):139-163, 2020.
[Winner, Anna Valicek Award, best student paper (Keji Wei), AGIFORS Annual Symposium (2019)]
21. R. Grahn and A. Jacquillat, “Optimal escort dispatch for airport travelers with reduced mobility”, *Transportation Research Part C: Emerging Technologies*, 111:421-438, 2020.
22. N. Ribeiro, A. Jacquillat and A. Antunes, “A large-scale neighborhood search approach to airport slot allocation”, *Transportation Science*, 53(6):1772-1797, 2019.
[Winner, INFORMS Aviation Applications Section Best Paper Prize (2020)]
23. N. Ribeiro, A. Jacquillat, A. Antunes and A. Odoni, “Improving slot allocation at Level 3 airports”, *Transportation Research Part A: Policy and Practice*, 127:32-54, 2019.
24. A. Jacquillat and V. Vaze, “Interairline equity in airport scheduling interventions”, *Transportation Science*, 52(4):941-964, 2018.
[Winner, INFORMS Transportation Science & Logistics Outstanding Paper, Air Transportation (2019)]
25. N. Ribeiro, A. Jacquillat, A. Antunes, A. Odoni and J. Pita, “An optimization approach for airport slot allocation under IATA guidelines”, *Transportation Research Part B: Methodological*, 112: 132-156, 2018.
[Winner, Anna Valicek Award, best student paper (Nuno Ribeiro), AGIFORS Annual Symposium (2018)]
26. A. Jacquillat and A. Odoni, “A roadmap toward airport demand and capacity management”, *Transportation Research Part A: Policy and Practice*, 114: 168-185, 2018.
27. A. Jacquillat and S. Zoepf, “Deployment and Utilization of Plug-in Electric Vehicles in Round-trip Carsharing Systems”, *International Journal of Sustainable Transportation*, 12(2):75-91, 2018.
28. A. Jacquillat, A. Odoni and M. Webster, “Dynamic control of runway configurations and of arrival and

- departure service rates at JFK airport under stochastic queue conditions”, *Transportation Science*, 51(1):155-176, 2017.
 [Winner, Anna Valicek Award for best student paper, AGIFORS Annual Symposium (2013)]
29. A. Jacquillat and A. Odoni, “A new airport demand management approach based on targeted scheduling interventions”, *Journal of Transport Economics and Policy*, 51(2):115-138, 2017.
 30. D. Gillen, A. Jacquillat and A. Odoni, “Airport demand management: the operations research and economics perspectives and potential synergies”, *Transportation Research Part A: Policy and Practice*, 94: 495-513, 2016.
 31. A. Jacquillat and A. Odoni, “An integrated scheduling and operations approach to airport congestion mitigation”, *Operations Research*, 63(6):1390-1410, 2015.
 [Winner, INFORMS Transportation Science & Logistics Best Paper Prize (2017)]
 [Winner, INFORMS George B. Dantzig Dissertation Award (2015)]
 [Winner, INFORMS Transportation Science & Logistics Dissertation Prize (2015)]
 [Winner, Milton Pikarsky Memorial Award for Best PhD Dissertation in transportation science and technology, Council of University Transportation Centers (2015)]
 32. A. Jacquillat and A. Odoni, “Endogenous control of service rates in stochastic and dynamic queuing models of airport congestion”, *Transportation Research Part E: Logistics and Transportation Review*, 73:133-151, 2015.

PAPERS UNDER REVIEW

1. A. Jacquillat, M. Li, M. Ramé and K. Wang, “Branch-and-price for prescriptive contagion analytics”, under major revision at *Operations Research*.
2. K. Cummings, A. Jacquillat and V. Vaze, “Activated Benders Decomposition for Day-ahead Itinerary Planning in Paratransit”, under major revision at *INFORMS Journal on Computing*.
3. A. Jacquillat, A. Schmid and K. Wang, “Optimizing relay operations toward sustainable logistics”.
4. A. Jacquillat and S. McDonald, “Optimizing Urban Air Mobility Operations in a Corridor Network”.

WORKING PAPERS

1. C. Barnhart, A. Jacquillat and A. Schmid, “Task assignment in robotic warehousing: a learning-enhanced large-scale neighborhood search approach”.
2. K. Cummings, A. Jacquillat and B. Martin-Iradi, “Design and optimization of demand-responsive microtransit systems”.
3. K. Cummings, A. Jacquillat, K. Mellou, I. Menache and M. Molinaro, “Online rack placement in large-scale data centers”.
4. A. Jacquillat and S. Lo, “Routing optimization for electrified logistics”.
5. A. Jacquillat, S. Martin and K. Wang, “Value of sharing in Robots-as-a-Service operations”.
6. A. Jacquillat and J. Wachspres, “Double column generation for prescriptive wildfire analytics”.
7. A. Jacquillat, J. Pauphilet and A. Robin, “Stochastic inventory planning: Exact methods and learning-based warm starts”.

SELECTED INVITED TALKS

2024 London Business School; Management Science & Operations

- Imperial College; Control & Optimization
 HEC; Department of Information Systems and Operations Management
 INSEAD; Technology and Operations Management
 Georgetown University; McDonough School of Business; Operations and Analytics Area
 University of Maryland; Robert H. Smith School of Business; Decision, Operations & IT
- 2023** Massachusetts Institute of Technology; Mobility Forum
 University of Colorado Boulder; Leeds School of Business; Strategy, Entrepreneurship and Operations
 Mila - Quebec AI Institute
 University of Southern California; Daniel J. Epstein Department of Industrial and Systems Engineering
- 2022** University of British Columbia; Sauder School of Business; Operations and Logistics
 Georgia Institute of Technology, H. Milton Stewart School of Industrial and Systems Engineering
 University of Toronto; Rotman School of Management; Operations Management and Statistics
- 2021** University of Cambridge; Judge Business School; Operations & Technology Management
- 2020** Massachusetts Institute of Technology; Mobility Forum
 Lancaster University; Management School; Department of Management Science
- 2019** Singapore University of Technology and Design; Engineering Systems and Design Pillar
 University of Pittsburgh; Department of Industrial Engineering
 Massachusetts Institute of Technology; Sloan School of Management; Operations Research & Statistics
- 2018** Pennsylvania State University; Department of Industrial and Manufacturing Engineering
 Carnegie Mellon University; Department of Civil and Environmental Engineering
- 2017** City University of Hong Kong; Department of Systems Engineering and Engineering Management
 Hong Kong Polytechnic University; Department of Logistics and Maritime Studies
- 2015** Massachusetts Institute of Technology; Department of Aeronautics and Astronautics
 Cornell University; School of Civil and Environmental Engineering
 University of Texas at Austin; Operations Research and Industrial Engineering Program
 University of Washington; Department of Civil and Environmental Engineering
 Carnegie Mellon University; Heinz College of Information Systems and Public Policy
 University of Illinois Urbana-Champaign; Department of Industrial & Enterprise Systems Engineering
- 2014** University of British Columbia; Sauder School of Business; Operations and Logistics

PROFESSIONAL AND LEADERSHIP ACTIVITIES

INDUSTRY CONFERENCES

- World Bank Workshop: Decarbonization of Freight and Logistics (2022)
 OECD/ITF Capacity Building through Efficient Use of Existing Airport Infrastructure (2017)
 Airport Stakeholders' Workshop on Airport Capacity Management and Slot Allocation (2017)
 NEXTOR 20th Anniversary Workshop, Federal Aviation Administration (2016)
 Getting it right at Mexico City's new airport: International conference on aviation services (2015)
 Global Challenges to Improve Air Navigation Performance Workshop, FAA (2014)
 American Airlines, Operations Research department

INFORMS

- | | |
|--|-----------|
| George Nicholson Student Paper Competition, Committee member | 2022–2023 |
| Transportation Science & Logistics Best Paper Prize, Committee member | 2022–2024 |
| Health Applications Society, Pierskalla Award, Committee member | 2021–2022 |
| Chair, Aviation Applications Section | 2020–2022 |
| Vice chair, Aviation Applications Section | 2018–2020 |
| Secretary/Treasurer, Aviation Applications Section | 2016–2018 |
| Dissertation Prize, Aviation Applications Section, Committee member | 2016 |
| Best Student Presentation, Aviation Applications Section, Committee member | 2014–2016 |

Reviewer for major academic journals, including *Operations Research*, *Management Science*, *Transportation Science*, *Manufacturing and Service Operations Management*, *Production and Operations Management*, *European Journal of Operational Research*, *Naval Research Logistics*, *Transportation Research Part A: Policy and Practice*, *Transportation Research Part B: Methodological*, *Transportation Research Part C: Emerging Technologies*, *Transportation Research Part D: Transport and Environment*, *Transportation Research Part E: Logistics and Transportation Review*, and *EURO Journal on Transportation and Logistics*

EDITORIAL ACTIVITIES

Associate Editor for <i>Operations Research</i> , Optimization area	2024–present
Guest Associate Editor for <i>Naval Research Logistics</i>	2022–present
Associate Editor for <i>INFORMS Journal on Optimization</i>	2021–present
Associate Editor for <i>Transportation Science</i> , Modes & Industries area	2020–present
Associate Editor for <i>Transportation Research Part C: Emerging Technologies</i>	2020–present

LANGUAGES

English (fluent)
French (native)