

Alexandre Jacquillat

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ACADEMIC EXPERIENCE

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

CARNEGIE MELLON UNIVERSITY, Pittsburgh, PA
Heinz College of Information Systems and Public Policy (primary appointment)
Tepper School of Business, Operations Management (minority appointment)
Alfred Blumstein Career Development Assistant Professor of Operations Research 2018 – 2019
Assistant Professor of Operations Research and Public Policy 2016 – 2019

EDUCATION

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

HONORS AND AWARDS

- Named in list of Leading Academic Data Leaders from the Chief Data Officer Magazine (2021,2022)
- Winner, INFORMS Transportation Science & Logistics Best Paper Prize (2021)
- Winner, INFORMS Aviation Applications Section Best Paper Prize (2021)
- *Transportation Science* Meritorious Service Award, Associate Editor (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)
- Teaching with Digital Technology Award, MIT (2020)
- Outstanding Teacher Award, MIT Sloan School of Management (2020)
- Winner, INFORMS Transportation Science & Logistics Outstanding Paper, Air Transportation (2019)
- Winner, Anna Valicek Award, AGIFORS – Nuno Ribeiro (2018)
- Best Technical Presentation, AGIFORS Annual Symposium (2018)
- Winner, INFORMS Transportation Science & Logistics Best Paper Prize (2017)
- Best Paper, Finance & Policy, 12th USA/Europe Air Traffic Management R&D Seminar (2016)
- 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)
- Winner, Dissertation Award competition, Industry Studies Association (ISA) (2015)

- Winner, Best Student Presentation Award, INFORMS Aviation Applications Section (2013)
- Winner, Anna Valicek Award, AGIFORS (2013)
- Graduate Research Award, TRB Airport Cooperative Research Program (2012)
- Presidential Award for Excellence, MIT's Graduate Student Council (2012)
- Medal L.E. Rivot from the French Academy of Science (2010) for the best undergraduate contribution in Mathematics and Economics
- Outstanding Leadership Award, École Polytechnique (2009)

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
AIR FRANCE, Orly, France, External Consultant Department of Operations Research	2009
AURECON, Cape Town, South Africa, Software Development Intern	2009

TEACHING EXPERIENCE

MIT, SLOAN SCHOOL OF MANAGEMENT, Instructor <i>15.083: Integer Optimization</i> Last student evaluation: 4.9/5.0	2021 – present
MIT, SLOAN SCHOOL OF MANAGEMENT, Instructor <i>15.071: The Analytics Edge, 15.072: Advanced Analytics Edge</i> Last student evaluation: 5.0/5.0	2019 – present
MIT, Guest Lecturer <i>15.000: Explorations in Management</i> <i>11.529: Mobility Ventures</i> <i>1.200: Transportation Systems Analysis</i> <i>16.763: Air Transportation Operations Research</i>	2019 – present
CARNEGIE MELLON UNIVERSITY, TEPPER SCHOOL OF BUSINESS, Instructor <i>70.462: Stochastic Modeling and Simulation</i> Last student evaluation: 5.0/5.0	2018 – 2019
CARNEGIE MELLON UNIVERSITY, HEINZ COLLEGE, Instructor <i>94.867 12.768 19.867: Decision Analytics for Business and Policy</i> Last student evaluation: 5.0/5.0	2017 – 2019
CARNEGIE MELLON UNIVERSITY, HEINZ COLLEGE, Instructor <i>95.760: Decision-Making under Uncertainty</i> Last student evaluation: 4.78/5.0	2016 – 2019

WORKING PAPERS

1. M. Cohen, A. Jacquillat and J. Serpa, “A Field Experiment on Airline Lead-In Fares”, minor revision at *Management Science*
2. W. Zhang, A. Jacquillat, K. Wang and S. Wang, “Routing Optimization with Vehicle-Customer Coordination”, major revision at *Management Science*.
3. M. Cohen, A. Jacquillat and H. Song, “Price Discrimination and Inventory Allocation in Bertrand Competition”, major revision at *Manufacturing & Service Operations Management*.
4. K. Wang, A. Jacquillat, and V. Vaze, “Vertiport Planning for Urban Aerial Mobility: An Adaptive Discretization Approach”, major revision at *Manufacturing & Service Operations Management*.
5. S. Birolini, A. Jacquillat, P. Schmedeman and N. Ribeiro, “Passenger-centric slot allocation at schedule-coordinated airports”, major revision at *Transportation Science*.
6. W. Zhang, A. Jacquillat, K. Wang and S. Wang, “Optimized Scenario Reduction: Solving Large-scale Stochastic Programs with Quality Guarantees”, major revision at *INFORMS Journal of Computing*.
7. K. Wang, M. Aydemir and A. Jacquillat, “Scenario-based Robust Optimization for Decision-making under Binary Uncertainty”, revision at *INFORMS Journal of Optimization*.
8. M. Blanchard, A. Jacquillat and P. Jaillet, “Probabilistic bounds on the k -Traveling Salesman Problem and the Traveling Repairman Problem”, under review at *Mathematics of Operations Research*.
9. A. Jacquillat, A. Schmid and K. Wang, “Relay logistics: a multi-variable generation approach”, in preparation.
10. A. Jacquillat, S. Martin, S. Sahli and K. Wang, “Routing and Scheduling for Shared Robots-as-a-Service Operations”, in preparation.
11. K. Cummings, A. Jacquillat and V. Vaze, “Activated Benders Decomposition for Paratransit Workforce Scheduling Under Cancellation Uncertainty”, in preparation.
12. A. Jacquillat, M. Rame and K. Wang, “Prescriptive SIR models: a column generation approach”, in preparation.

SELECTED PUBLICATIONS

1. 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.
2. A. Jacquillat, “Predictive and Prescriptive Analytics toward Passenger-centric Ground Delay Programs”, *Transportation Science*, in press.
3. D. Bertsimas, V. Digalakis Jr, A. Jacquillat, M. Li and A. Previero, “Where to locate COVID-19 mass vaccination centers?”, *Naval Research Logistics*, 69(2):179-200, 2022.
4. K. Wei, V. Vaze and A. Jacquillat, “Optimal Transit Planning: Interactions with Ride-hailing, Congestion and Passenger Choice”, *Transportation Science*, in press.
5. 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.
6. V. Abhishek, M. Dogan and A. Jacquillat, “Strategic Timing and Dynamic Pricing for Online Resource Allocation”, *Management Science*, in press, 2021.
7. K. Wang and A. Jacquillat, “A Stochastic Integer Programming Approach to Air Traffic Scheduling

- and Operations”, *Operations Research*, 68(5):1375-1402, 2020.
8. J. Lee, L. Marla and A. Jacquillat, “Dynamic Airline Disruption Management under Airport Operating Uncertainty”, *Transportation Science*, 54(4):973-997, 2020.
 9. K. Wei, V. Vaze and A. Jacquillat, “Airline Timetable Development and Fleet Assignment Incorporating Passenger Choice”, *Transportation Science*, 54(1):139-163, 2020.
 10. N. Ribeiro, A. Jacquillat and A. Antunes, “A Large-scale Neighborhood Search Approach to Airport Slot Allocation”, *Transportation Science*, 53(6):1772-1797, 2019.
 11. A. Jacquillat and V. Vaze, “Interairline Equity in Airport Scheduling Interventions”, *Transportation Science*, 52(4):941-964, 2018.
 12. 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.
 13. 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.
 14. A. Jacquillat and A. Odoni, “An Integrated Scheduling and Operations Approach to Airport Congestion Mitigation”, *Operations Research*, 63(6):1390-1410, 2015.

OTHER PUBLICATIONS

1. W. Wang, A. Jacquillat and V. Vaze, “Primary vs. Secondary Infrastructure Capacity Allocation Mechanisms”, *European Journal of Operational Research*, in press.
2. R. Grahn and A. Jacquillat, “Optimal Escort Dispatch for Airport Travelers with Reduced Mobility”, *Transportation Research Part C: Emerging Technologies*, 111:421-438, 2020.
3. 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.
4. A. Jacquillat and A. Odoni, “A Roadmap toward Airport Demand and Capacity Management”, *Transportation Research Part A: Policy and Practice*, 114: 168-185, 2018.
5. 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.
6. 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.
7. 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.
8. A. Jacquillat and A. Odoni, “Endogenous Control of Arrival and Departure Service Rates in Dynamic and Stochastic Queuing Models with Application at JFK and EWR”, *Transportation Research Part E: Logistics and Transportation Review*, 73:133-151, 2015.

SELECTED INVITED TALKS

University of British Columbia; American Airlines; University of Illinois at Urbana-Champaign; Carnegie Mellon University; University of Washington; University of Texas at Austin; Cornell University; MIT; City University of Hong Kong; Hong Kong Polytechnic University; Pennsylvania State University; University of

Pittsburgh; Lancaster University; World Bank; University of Toronto; Georgia Institute of Technology.

PROFESSIONAL AND LEADERSHIP ACTIVITIES

Associate Editor for *INFORMS Journal on Optimization, Transportation Science* and *Transportation Research Part C: Emerging Technologies*; Guest Associate Editor for *Naval Research Logistics*.

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, EURO Journal on Transportation and Logistics*

INVITED SPEAKER / PANELIST 2015-present

World Bank Workshop: Decarbonization of Freight and Logistics
OECD/ITF Capacity Building through Efficient Use of Existing Airport Infrastructure
Airport Stakeholders' Workshop on Airport Capacity Management and Slot Allocation
2nd Airport Innovation Accelerator Forum
NEXTOR 20th Anniversary Workshop, Federal Aviation Administration
Getting it right at Mexico City's new airport: International conference on aviation and airport services
Global Challenges to Improve Air Navigation Performance Workshop, Federal Aviation Administration

INFORMS 2022

George Nicholson Student Paper Competition, Committee member

INFORMS, HEALTH APPLICATIONS SOCIETY 2021

Pierskalla Award, Committee member

INFORMS, AVIATION APPLICATIONS SECTION 2014-present

Chair (2020-2022); Vice chair (2018-2020); Secretary/Treasurer (2016-2018)
Dissertation Prize and Best Student Presentation Competition, Committee member

MIT, PARKING & TRANSPORTATION COMMITTEE, Cambridge, MA 2012 – 2014

Graduate Student Representative

MIT, ESD STUDENT SOCIETY, Cambridge, MA 2012 – 2015

President (2013 – 2015)

MIT, TRANSPORTATION CLUB, Cambridge, MA 2012 – 2014

ASSOCIATION DU LOCKED-IN SYNDROME, Paris, France 2007 – 2008

OTHERS

- Languages: English (fluent), French (native), German (intermediate)
- Programming Languages: Julia, R, Python
- Extracurricular activities: Traveling, Cooking, Baking, Tennis