AMIR BRUDNER

Civil and Environmental Engineering Department

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Curriculum Vitae

Research Interests

My research lies at the intersection of **urban transport policy** and operations research. For example, using tools from **game theory** to explore the effects of **automated vehicles** on future trends or the effects of **pricing policies** on behavior, focusing on sustainable urban mobility and the integration of emerging technologies into transportation systems.

Academic Education

PhD,
The Hebrew University of Jerusalem, Hebrew University Business School, Operations Research, *with honors (Hans Wiener Prize for outstanding doctoral degree)*, 2022.
Topic: Evaluating transportation markets through game theory.
Advisor: Professor Nicole Adler.

Master Thesis,
Ben Gurion University, Department of Industrial Engineering, 2016.
Topic: Investing in research and and teaching facilities in an academic institute - an optimal control and differential game model.
Advisor: Professor Arieh Gavious.

M.B.A.,
The Hebrew University of Jerusalem, Hebrew University Business School, Finance and Accounting, *magna cum laude*, 2009.

B.Sc.,
The Jerusalem College of Engineering, Department of Industrial Engineering, Information System, *summa cum laude*, 2006.

Professional education

MIT Professional,
Massachusetts Institute of Technology, MIT professional education, Modeling and simulation of transportation networks with Prof. Moshe Ben-Akiva, August 2017.

Grants

2023–2024	**MIT Portugal Program (MPP)**. 2023 Call for Seed Grant Proposals, $100,000.
2020–2021	**The Israeli Smart Transportation Research Center (ISTRC)**, 100,000 NIS ($30,000).

Awards

2023	**Hans Wiener Prize for outstanding doctoral degree**. $5,000
2018–2022	The Hebrew University of Jerusalem, **University President's Full Scholarship of Distinction**.
2021	**The Gal-Edd foundation scientific publication award**.
2021	**Best scientific presentation**, The Israeli Smart Transportation Research Center (ISTRC) 2nd student conference,
2020–2021	Award for **Excellence in Teaching** at Azrieli College of Engineering.
2009	The Hebrew University of Jerusalem School of Business Administration, **Dean's List Award**. Graduated *magna cum laude*, with a GPA of 94.96.
2003–2006	The Jerusalem College of Engineering Department of Industrial Engineering, **Dean's List Award** in all years. **Academic Excellence Scholarship** in all years. Graduated *summa cum laude*, 1st in class year with a GPA of 95.15.

Research Experience

2023-Present	**Postdoctoral Researcher**, Massachusetts Institute of Technology, Intelligent Transportation Systems (ITS) Lab. Exploring the pricing and policy for a sustainable transportation system and the failure and future perspective of demand-responsive transportation using behavioral and demand models.

Teaching Experience

2016-2023	The Hebrew University of Jerusalem, Hebrew University Business School, **Lecturer**. Courses: Operations Management, Quantitative Models (in English).
2018	The Hebrew University of Jerusalem, Hebrew University Business School, **The Intel Big Data Initiative coordinator**.

2008–2022	The Jerusalem College of Engineering, Department of Industrial Engineering, **Teaching Assistant**.

Courses: Information Systems Analysis and Planning ,Statistics, Operations Research 1 and 2, Engineering Optimization, Database Management, Internet Developing, Control and Quality Assurance, Intro to Industrial Engineering and Management.

Award for Excellence in Teaching (2020,2021).

2011–2017	The Jerusalem College of Engineering, Department of Industrial Engineering, **Lecturer**.

Courses: Methods Engineering, Control and Quality Assurance.

2011–2017	The Jerusalem College of Engineering, Department of Industrial Engineering, **Academic Supervisor for Final Projects**.

Supervises projects in Operations Research and Information Systems.

Industry Experience

2021-2022	Israel Ministry of Transport, **Member of the strategic national parking committee**.
2018-2022	**Transportation policy advisor on parking policies** to municipalities (Jerusalem, Tel Aviv, Nahariya and more) and government officials (Ministry of Transport, Ministry of Finance, Prime minister's office, Planning committees).
2007–2016	The Jerusalem College of Engineering, **System Analysis Team Leader**. Forming the Systems Analysis division within the IT department. Responsible for the characterization, implementation, and evaluation of all information systems, both administrative and academic.

Workshops

2017–2019	**Air Transport and Regional Development (ATARD)**.

List of Publications

Adler, N., Brudner, A., & Proost, S. (2021). A review of transport market modeling using game-theoretic principles. *European Journal of Operational Research*, 291(3), 808-829.

Adler, N., Brudner, A., Gallotti, R., Privitera, F., & Ramasco, J. J. (2022). Does big data help answer big questions? The case of airport catchment areas & competition. *Transportation Research Part B: Methodological*, 166, 444-467.

Brudner, A. (2023). On the management of residential on-street parking: Policies and repercussions. Transport Policy, 138, 94-107.

Selected Conference Papers and Invited Presentations

2022 "Adler, Nicole and Brudner, Amir: Creating equitable transport markets with AVs". Annual Conference of the International Transportation Economics Association (ITEA) (June 2022).

2021 "Adler, Nicole and Brudner, Amir: Creating equitable transport markets with AVs". Presented at the 2021 Institute for Operations Research and the Management Sciences (INFORMS) Annual Meeting in Anaheim, CA, USA (October 2021) and at the Operations and Research Society of Israel (ORSIS) annual meeting, Technion, Haifa, Israel (August 2021).

2019 "Brudner, Amir; Gallotti, Riccardo; Privitera, Filippo; J. Ramasco, Jose and Adler, Nicole: Big data and platform competition: The case of a multi-airport system". Presented at the Annual School and Conference of the International Transportation Economics Association (ITEA), Paris School of Economics and at the 30th European Conference on Operational Research (EURO), Dublin, Ireland (June 2019).

2018 "Adler, Nicole and Brudner, Amir: Estimating High Speed Rail and Airport Catchment Areas". Presented at the 14th International Conference on Industrial Logistics (ICIL), Beer-Sheva, Israel (May 2018).

Professional Associations Membership

The Institute for Operations Research and the Management Sciences (INFORMS)
Transportation Science and Logistics (TSL) Society at INFORMS
Operations Research Society of Israel (ORSIS)
The Israeli Association of Transportation Research