

Yaron Shaposhnik

Associate Professor of Operations Management and Information Systems
Simon Business School, University of Rochester
Carol Simon Hall 3-345, Rochester, NY 14627
Phone: (617) 575-2657
Email: aron@simon.rochester.edu

Research Interests

Machine learning methodologies and their application for solving business problems; sequential decision-making with uncertainty reduction mechanisms; business analytics

Education

Massachusetts Institute of Technology, Cambridge, MA
PhD in Operations Research; September 2016
Advisors: Professor Retsef Levi and Professor Thomas Magnanti
Dissertation title: *Exploration vs. Exploitation: Reducing Uncertainty in Operational Problems*
Committee: Retsef Levi, Thomas Magnanti, Georgia Perakis, David Shmoys (Cornell ORIE)

Technion – Israel Institute of Technology, Haifa, Israel
M.S. in Industrial Engineering with Honors, February 2010
Advisors: Professor Yale Herer and Dr. Hussein Naseraldin

Technion – Israel Institute of Technology, Haifa, Israel
B.S. in Information Systems Engineering with Honors, March 2005

Academic Appointments

2024-present *Associate professor, University of Rochester*, Rochester, NY
2016-2024 *Assistant professor, University of Rochester*, Rochester, NY

Journal Publications

- [13] “Pandora's Box Problem with Sequential Inspections”, joint work with Ali Aouad and Jingwei Ji
- Status: ***Operations Research*** (published online)
- [12] “Waiting-Time Prediction with Invisible Customers”, joint work with Yoav Kerner, Ricky Roet-green, Arik Senderovich, and Yuting Yuan
- ***Manufacturing & Service Operations Management***, 2025
- [11] “A Dual-index Rule for Managing Temporary Congestion”
- ***European Journal of Operational Research***, 2025
- [10] “Scheduling with Testing of Heterogeneous Jobs”, joint work with Retsef Levi and Tom Magnanti
- ***Management Science***, 2024

[9] “Interpretable Prediction Rules for Congestion Risk in ICUs”, joint work with Fernanda Bravo, Cynthia Rudin, and Yuting Yuan

- ***Stochastic Systems***, 2024

[8] “Visualizing the implicit model selection tradeoff”, joint work with Zezhen (Dawn) He

- ***Journal of Artificial Intelligence Research*** (JAIR, top AI journal; invited for presentation at AAAI), 2023

[7] “Globally-Consistent Rule-Based Summary-Explanations for Machine Learning Models: Application to Credit-Risk Evaluation”, joint work Cynthia Rudin

- ***Journal of Machine Learning Research*** (JMLR, top ML journal), 2023

[6] “A Polynomial-Time Approximation Scheme for Sequential Batch-Testing of Series Systems”, joint work Danny Segev

- ***Operations Research***, 2022

[5] “A Holistic Approach to Interpretability in Financial Lending: Models, Visualizations, and Summary-Explanations”, joint work with Chaofan Chen, Kangcheng Lin, Cynthia Rudin, Sijia Wang, and Tong Wang.

- ***Decision Support Systems***, 2022
- Winner of the 2018 FICO Recognition Award for the explainable machine learning challenge hosted by FICO, and sponsored by Google, Imperial College London, MIT, University of Oxford, UC Irvine and UC Berkeley

[4] “Understanding How Dimension Reduction Tools Work: An Empirical Approach to Deciphering t-SNE, UMAP, TriMAP, and PaCMAP for Data Visualization”, joint work with Haiyang Huang, Cynthia Rudin, and Yingfan Wang.

- ***Journal of Machine Learning Research*** (JMLR, top ML journal), 2021
- Winner of the 2023 John M. Chambers Statistical Software award by the Association for Computing Machinery (ACM) ([link](#))

[3] “Mining Optimal Policies: A Pattern Recognition Approach to Model Analysis”, joint work Fernanda Bravo

- ***INFORMS Journal on Optimization***, 2020
(a new INFORMS journal; editorial board: <https://pubsonline.informs.org/page/ijoo/editorial-board>)

[2] “Scheduling with Testing”, joint work with Retsef Levi and Tom Magnanti

- ***Management Science***, 2019
- The 2015 INFORMS Service Science Section Best Student Paper Award Competition, Finalist
- The 2014 INFORMS Manufacturing and Service Operations Management Society Student Paper Competition, Finalist

[1] “Optimal Ordering for a Probabilistic One-time Discount”, joint work with Yale Herer and Hussein Naseraldin

- ***European Journal of Operational Research***, 2015

Submitted Papers

[a] “Algorithm Adoption and Explanations: An Experimental Study on Self and Other Perspectives”, joint work with Fernanda Bravo, Zezhen (Dawn) He, and León Valdés

- Status: submitted

[b] “Explaining Model Behavior Across Space and Time: Differential and Intertemporal Explanations”, joint work with Zezhen (Dawn) He

- Status: submitted

[c] “Dynamic Prediction of Waiting Time Intervals: Application to Cancer Care Facilities”, joint work with Yashi Huang and Arik Senderovich

- Status: submitted

Work in Progress

- “Forecasting Infusion Chair Occupancy as a Probabilistic, Curve, Set Function Prediction” with Yashi Huang and Arik Senderovich
- “Can We Predict the Day Ahead? A Study of Appointment-Based Healthcare Service Systems” with Yashi Huang and Arik Senderovich
- “Coordination of Patient Discharge Processes” with Le (Lexie) Sun and Vera Tilson
- “Fairness and Efficiency of Teledermatology Triage Policies” with Le (Lexie) Sun and Vera Tilson
- “PyNestedSim: An Open-Source Python Package for Nested Simulation in Operations Management” with Hongyu Wang
- “Are State-of-the-Art ML Models Optimal for Predicting Waiting Times? An Empirical Study” with Hongyu Wang

Unpublished work

- [a] “Stochastic Selection Problems with Testing”, joint work with Chen Attias, Robert Krauthgamer, and Retsef Levi
- Status: reject and resubmit at **Management Science**; Last update: 2019 (the contribution of the paper was diminished by three concurrent publications: Doval 2018, Singla 2018, and Beyhaghi and Kleinberg 2019)

PhD Advising

- Yuting Yuan – graduated in 2022 (Assistant Professor at the Smeal College of Business at the Pennsylvania State University; previously, a Visiting Assistant Professor of Mathematics and Data Science at the College of William & Mary)
- Zezhen (Dawn) He – graduated in 2025 (postdoc at MIT)
- Yashi Huang – 6th year PhD student
- Le (Lexie) Sun – 4rd year PhD student
- Hongyu Wang – 3rd year PhD student
- Shanshan Huang – 2nd year PhD student

Research Presentations (by year, including virtual)

* Denotes that the work was presented by a coauthor

- 2026 Conferences: POMS 2026*, Behavioral Operations Conference 2026, Conference on Artificial Intelligence, Machine Learning, and Business Analytics – Columbia*, NSF AI-SDM Workshop on Human-AI Complementarity for Decision Making – Carnegie Mellon*, 9th Annual Research Roundtable: Data Analytics in Healthcare, Toronto*
Seminars: U. of Alberta (postponed)
- 2025 Conferences: POMS 2025*, AAAI 2025*, INFORMS 2025*, 2025 Conference on AI, ML, and Business Analytics at Columbia School of Business*
Seminars: Technion, TAU, Hebrew University of Jerusalem
- 2024 Seminars: Boston University Questrom School of Business, MIT Sloan School of Management
Conferences: POMS 2024*, MSOM 2024*, INFORMS 2024*
- 2023 Seminars: NYU Stern School of Business, University of Toronto Rotman Business School, Boston college, Melbourne Business School, National University of Singapore, Paris Saclay*, ESMT, University of Maryland Smith School of Business, University of Michigan Ross School of Business
Conferences: INFORMS Healthcare Conference 2023*, INFORMS 2023*, POMS 2023*, AI in Management 2023*, Eastern Great Lakes Analytics Conference at the University at Buffalo
- 2022 Seminars: U. of Luxembourg, Testing Assessment & Risk department group at Morgan Stanley*
Conferences: INFORMS*
- 2021 Seminars: Duke Fuqua, London Business School, U. of Maine guest speaker in the course *Interpretability and Explainability in Machine Learning*, Boston University IS PhD Seminar, U. of Toronto*

2020 Conferences: INFORMS*, EURO*, Informs Healthcare*, POMS*, CORS*
 Seminars: Yale SOM, Tel Aviv University, Ben-Gurion University
 Conferences: INFORMS*

2019 Seminars: Duke Fuqua*
 Conferences: INFORMS*, University of Toronto Research Roundtable, POMS*, Informs Healthcare*, CIST

2018 Seminars: Technion Quant seminar
 Conferences: INFORMS*, MSOM, NIPS, EURO*, POMS, Conference on Optimization and Discrete Geometry: Theory and Practice* (TAU), New Challenges in Scheduling Theory* (Aussois, France)

2017 Seminars: University of Pittsburgh, Rochester Institute of Technology
 Conferences: INFORMS, MSOM, POMS Israel

2016 Seminars: Duke's Fuqua School of Business, Yale SOM, Eindhoven University of Technology, Columbia DRO, Cornell ORIE, Simon Business School
 Conferences: INFORMS

2015 Seminars: Sloan School of Management, Technion IIT, TAU IE seminar, BGU
 Conferences: INFORMS, MSOM, Cornell ORIE workshop

2014 Seminars: Technion, Ben Gurion University, IBM Haifa
 Conferences: INFORMS, MSOM

Research Presentations (by title, including virtual)

* Denotes that the work was presented by a coauthor

“Fairness and Efficiency of Teledermatology Triage Policies” at INFORMS 2025*

“Explaining Model Behavior Across Space and Time: Differential and Intertemporal Explanations” (2025 Conference on AI, ML, and Business Analytics” at Columbia School of Business*, POMS 2025*, INFORMS 2025*)

“Three Methods That Help Understand Machine Learning Models” (Eastern Great Lakes Analytics Conference at the University at Buffalo, BU 2024, MIT 2024)

“A decision support tool for physician rostering” (INFORMS Healthcare Conference 2023*, INFORMS 2023*)

“A Behavioral Study of Self-other Adoption Discrepancies in XAI” (INFORMS 2022*, POMS 2023*, Behavioral Operations Conference 2023*, INFORMS 2023*, POMS 2024*, INFORMS 2024*, POMS 2025*)

“Visualizing the implicit model selection tradeoff”, joint work with Zezhen (Dawn) He (INFORMS 2021*, AI in Management 2023*, POMS 2023, Eastern Great Lakes Analytics Conference at the University at Buffalo)

“Understanding How Dimension Reduction Tools Work: An Empirical Approach to Deciphering t-SNE, UMAP, TriMAP, and PaCMAP for Data Visualization”, joint work with Haiyang Huang, Cynthia Rudin, and Yingfan Wang (INFORMS 2020*, presented to the Security, Testing Assessment & Risk department at Morgan Stanley*, seminar at Paris Saclay 2023*)

“Waiting-Time Prediction with Invisible Customers”, joint work with Yoav Kerner, Ricky Roet-green, and Arik Senderovich (INFORMS 2020, U. of Toronto 2021*, POMS 2021*, CORS 2021*, Informs Healthcare 2021* EURO 2021*, INFORMS 2022*)

“Pandora's Box Problem with Sequential Inspections”, with Jingwei Ji and Ali Aouad, (INFORMS 2020*, INFORMS 2022, U. of Luxembourg departmental seminar 2022, Boston college departmental seminar 2023).

“An Interpretable Model with Globally Consistent Explanations for Credit Risk”, C. Chen, K. Lin, C. Rudin, Y. Shaposhnik, S. Wang, Sijia and T. Wang (NIPS 2018*)

“Simple Prediction Rules for Admission Control in Queueing Systems”, Fernanda Bravo, C. Rudin, Y. Shaposhnik, and Yuting Yuan (University of Toronto 2019, POMS 2019*, Informs Healthcare 2019*, INFORMS 2019*)

“Model-Agnostic and Globally-Consistent Rule-Based Explanations with Application to Credit-Risk Evaluation”, Cynthia Rudin and Y. Shaposhnik (Technion Quant seminar 2018, INFORMS 2019, CIST 2019, Tel Aviv University 2020, Ben-Gurion University 2020, INFORMS 2020, Yale SOM 2020, U. of Maine guest speaker in the course *Interpretability and Explainability in Machine Learning* 2021, Duke Fuqua 2021, Boston University IS PhD Seminar 2021, London Business School 2021, Melbourne Business School 2023, National University of Singapore 2023, NYU Stern School of Business 2023, University of Toronto Rotman Business School 2023, U. of Maryland 2023, U. of Michigan 2023)

“Discovering Optimal Policies: A Machine Learning Approach to Model Analysis”, F. Bravo and Y. Shaposhnik (University of Pittsburgh 2017, Rochester Institute of Technology 2017, MSOM 2018*, INFORMS 2018*, European Conference on Operational Research 2018*, POMS 2019, Duke Fuqua 2019*)

“A Polynomial-Time Approximation Scheme for Sequential Batch-Testing of Series Systems”, Danny Segev and Y. Shaposhnik (MSOM 2017, POMS Israel 2017, INFORMS 2017, Conference on Optimization and Discrete Geometry: Theory and Practice*, TAU, April 2018, New Challenges in Scheduling Theory*, Aussois, France, April 2018)

“Exploration vs. Exploitation: Reducing Uncertainty in Operational Problems”, C. Attias, R. Krauthgamer, R. Levi, T. Magnanti, and Y. Shaposhnik (Cornell ORIE workshop 2015, Sloan School of Management 2015, Technion 2015, TAU IE seminar 2015, BGU 2015, Duke's Fuqua School of Business 2016, Yale SOM 2016, Eindhoven University of Technology 2016, Columbia DRO 2016, Cornell ORIE 2016, University of Rochester's Simon Business School 2016, INFORMS 2016)

“When and How to Test in Scheduling Nonhomogeneous Job Classes”, R. Levi, T. Magnanti, and Y. Shaposhnik (MSOM 2015)

“Scheduling with Testing”, R. Levi, T. Magnanti, and Y. Shaposhnik (INFORMS 2013, Technion 2014, Ben Gurion University 2014, IBM Haifa 2014, MSOM 2014, INFORMS 2014)

“Optimal ordering for a probabilistic one-time discount”, Y. Shaposhnik, Y. Herer, and H. Naseraldin (Technion 2009, IE&M 2010, ORT Braude 2010)

Professional Experience

2024-present Associate professor, **University of Rochester**, Rochester, NY
2016-2024 Assistant professor, **University of Rochester**, Rochester, NY
2014-2015 Teaching assistant, **Massachusetts Institute of Technology**, Cambridge, MA
2014 Research intern, **Brigham and Women's Hospital**, Boston, MA
2011-2016 Research assistant, **Massachusetts Institute of Technology**, Cambridge, MA
2010-2011 Logistics planner, **Manfrotto Bags**, Jerusalem, Israel
2008-2010 Teaching assistant, **Technion – Israel Institute of Technology**, Haifa, Israel
2006-2007 Software engineer, **Mind CTI**, Yokneam, Israel

Teaching Experience

* The teaching evaluation scale at the Simon Business School is 1-5

** MS level audience include MBA, MSBA, MSMA, PMBA, and EMBA students

Institution	Academic term	Course name	Role	Audience	# students	Evaluations (instructor/course, per section)
Simon Business School	2026 Spring	PhD course on Optimization	Instructor	PhD	4	TBD

Simon Business School	2026 Spring	Supply chain analytics	Instructor	MBA (full, parttime, executive)	17	TBD Comment: new course
Simon Business School	2026 Spring	Predictive Analytics using Python	Instructor	MS	26	TBD
Simon Business School	2025 Spring	PhD research seminar	Instructor	PhD	8	5/5
Simon Business School	2025 Spring	PhD course on Optimization	Instructor	PhD	3	5/5
Simon Business School	2025 Spring	Predictive Analytics using Python	Instructor	MS level	92	4.67/4.38, 4.75/4.33
Simon Business School	2024 Spring	Predictive Analytics using Python	Instructor	MS level	116	4.56/4.44, 4.54/4.62
Simon Business School	2024 Spring	PhD course on Optimization	Instructor	PhD	2	5/5 (only 1 student completed survey)
Simon Business School	2023 Spring	Predictive Analytics using Python	Instructor	MS level	149	4.71/4.67, 4.54/4.44
Simon Business School	2023 Spring	PhD course on Optimization	Instructor	PhD	2	Teaching evaluations were not submitted
Simon Business School	2023 Spring	PhD research seminar	Instructor	PhD	6	5/5
Simon Business School	2022 Spring	Predictive Analytics using Python	Instructor	MS level	184	4.27/4.23, 4.64/4.64
Simon Business School	2022 Spring	PhD course on Optimization	Instructor	PhD	4	5/5
Simon Business School	2021 Summer	Predictive Analytics using Python	Instructor	MS level	115	4.35/4.19, 4.15/3.86
Simon Business School	2021 Spring	A PhD seminar on Data Analytics in OM	Instructor	PhD	6	5/5
Simon Business School	2021 Spring	Predictive Analytics using Python	Instructor	MS level	106	3.96/3.88
Simon Business School	2019 Fall	Predictive Analytics using Python	Instructor	MS level	200	3.24/2.93, 3.08/2.63, 3.5/3.11
Simon Business School	2019 Spring	A PhD seminar on Interpretable ML	Instructor	PhD	13	4.67/4.67
Simon Business School	2019 Spring	Predictive Analytics using Python	Instructor	UG	44	4.3/4.2
Simon Business School	2019 Winter	Predictive Analytics using Python	Instructor	MS level	113	3.78/4, 3.95/3.97
Simon Business School	2018 Spring	Predictive Analytics using Python	Instructor	UG	20	3.6/3.6
Simon Business School	2018 Winter	Predictive Analytics using Python	Instructor	MS level	83	4.16/3.96, 3.5/3.5
Simon Business School	2017 Spring	PhD Seminar on Statistical Learning	Instructor	PhD	9	4.2/4.2
Simon Business School	2017 Winter	Predictive Analytics using Python	Instructor	MS level	42	3.69/?
MIT	2015 Summer	Introduction to Operations Management	TA, taught recitations	EMBA		6.33 out of 7

MIT	2015 Spring	Introduction to Operations Management	TA, taught recitations	MS level		
MIT	2014 Fall	Data, Models, and Decisions	TA, taught recitations	MS level		
MIT	2014 Spring	Optimization Methods in Management Science	TA, taught recitations	UG		
Technion IIT	2009-2010	Supply Chains Management	TA, taught recitations	UG		
Technion IIT	2009 Spring	Production Systems Engineering	TA, taught recitations	UG		
Technion IIT	2008 Fall	Product Design	TA, taught recitations	UG		

Honors and Awards

- 2023** Simon Business School Education Innovation Award (finalist).
The software developed in the work “Understanding How Dimension Reduction Tools Work: An Empirical Approach to Deciphering t-SNE, UMAP, TriMAP, and PaCMAP for Data Visualization” won the 2023 John M. Chambers Statistical Software award by the American Statistical Association ([link](#)), and the 2024 Award for Innovation in Statistical Programming and Analytics by the Section for statistical programmers and analysts of the American Statistical Association ([link](#)).
- 2018** The explainable machine learning challenge hosted by FICO, and sponsored by Google, Imperial College London, MIT, University of Oxford, UC Irvine and UC Berkeley (won the FICO recognition award).
- 2015** The INFORMS Service Science Section Best Student Paper Award Competition (finalist).
- 2014** The INFORMS Manufacturing and Service Operations Management Society Student Paper Competition, (finalist).

Service (U of R) Information Systems area coordinator (2024-), Graduate curriculum committee (2025-) PhD committee (2017-2025), MS analytics programs committee (2018-), Sproull and Provost review panels (2025), UR ad-hoc tenure review committees, Simon School ad-hoc committees

Service Ad hoc reviewer for the Israel Science Foundation (ISF), Management Science (MS), Operations Research (OR), Manufacturing & Service Operations Management (MSOM), Production and Operations Management (POM), Information Systems Research (ISR), MIS Quarterly (MISQ), Journal of Management Information Systems (JMIS), Service Science, Annals of Operations Research, Naval Research Logistics (NRL), INFORMS Journal on Computing (IJOC), Mathematical Methods of Operations Research, European Journal of Operational Research (EJOR), OR Spectrum, Journal of Global Optimization, ICIS, CIST, INFORMS DM best paper student competition, Business Process Optimization workshop, Knowledge discovery and data mining conference.

Languages Hebrew (native), English (fluent)