# ELLEN VITERCIK

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# ACADEMIC HISTORY

- Carnegie Mellon University
  - Ph.D. in Computer Science, 2021
  - M.S. in Computer Science, 2018
- Columbia University
  - B.A. in Mathematics, summa cum laude, 2015

# EMPLOYMENT RECORD

- 2022–present: Assistant Professor, Stanford University
  - Departments: Management Science & Engineering; Computer Science
- 2021–2022: Miller Research Fellow (postdoctoral), University of California, Berkeley
  - Hosts: Jennifer Chayes; Michael I. Jordan
- 2019: Research Intern, Google, New York
  - Host: Andrés Muñoz Medina
- 2018: Research Intern, Microsoft Research New England
  - Host: Jennifer Chayes

# Awards and Honors

- 2024 AI2050 Early Career Fellowship (Schmidt Sciences)
- 2024 National Science Foundation CAREER Award
- 2023 Exemplary Artificial Intelligence Track Paper Award (ACM Conference on Economics and Computation)
- 2022–2025 Gabilan Fellowship, Stanford University
- 2022 Robert N. Noyce Faculty Fellow, Stanford University
- 2022 Simons–Berkeley Research Fellowship (declined)
- 2021–2022 Miller Research Fellowship, University of California, Berkeley
- 2021 ACM SIGecom Doctoral Dissertation Award

- 2021 Distinguished Dissertation Award, Carnegie Mellon University School of Computer Science
- 2021 Victor Lesser Distinguished Dissertation (Honorable Mention), International Foundation for Autonomous Agents and Multiagent Systems
- 2019 Best Presentation by a Student or Postdoctoral Researcher (ACM Conference on Economics and Computation)
- 2019 Early Career Invited Lecture Award, University of British Columbia (Science)
- 2019–2021 IBM PhD Fellowship
- 2019–2020 Fellowship in Digital Health, CMU Center for Machine Learning and Health
- 2019 Exemplary Artificial Intelligence Track Paper Award (ACM Conference on Economics and Computation)
- 2017 Teaching Assistant of the Year, CMU Machine Learning Department
- 2016–2019 National Science Foundation Graduate Research Fellowship
- 2016–2017 Microsoft Research Women's Fellowship
- 2015–2021 National Physical Science Consortium Fellowship (declined)

#### BIBLIOGRAPHICAL INFORMATION

#### **Refereed Journal Publications**

- 1. (2025) Maria-Florina Balcan, Tuomas Sandholm, and Ellen Vitercik. Generalization Guarantees for Multi-item Profit Maximization: Pricing, Auctions, and Randomized Mechanisms *Operations Research* (*OR*). (Supersedes paper in ACM Conference on Economics and Computation (EC) 2018.)
- 2. (2024) Maria-Florina Balcan, Dan DeBlasio, Travis Dick, Carl Kingsford, Tuomas Sandholm, and Ellen Vitercik. How Much Data is Sufficient to Learn High-Performing Algorithms? *Journal of the ACM (JACM)*. (Featured paper; supersedes paper in ACM Symposium on Theory of Computing (STOC) 2021.)
- 3. (2024) Maria-Florina Balcan, Travis Dick, Tuomas Sandholm, and Ellen Vitercik. Learning to Branch: Generalization Guarantees and Limits of Data-Independent Discretization. *Journal of the ACM (JACM)*. (Supersedes papers in International Conference on Machine Learning (ICML) 2018 and 2020.)

# Refereed Journal Publications Submitted

1. (2024) Joon Suk Huh, Ellen Vitercik, and Kirthevasan Kandasamy. Bandit Profit-Maximization for Targeted Marketing. Submitted to *Operations Research*. Status: Major revision requested. (Supersedes paper in ACM Conference on Economics and Computation (EC) 2024.)

2. (2024) Wenshuo Guo, Nika Haghtalab, Kirthevasan Kandasamy, and Ellen Vitercik. Leveraging Reviews: Learning to Price with Buyer and Seller Uncertainty. Submitted to *Operations Research*. Status: Minor revision requested. (Supersedes paper in ACM Conference on Economics and Computation (EC) 2023.)

# Refereed Conference/Symposia Proceedings

- 1. (2025) Yu He and Ellen Vitercik. Primal-Dual Neural Algorithmic Reasoning. *International Conference on Machine Learning (ICML)*. Spotlight (2.6% of all submissions).
- 2. (2025) Judy Hanwen Shen, Ellen Vitercik, and Anders Wikum. Algorithms with Calibrated Machine Learning Predictions. *International Conference on Machine Learning (ICML)*. Spotlight (2.6% of all submissions).
- 3. (2025) Jingruo Sun, Wenzhi Gao, Ellen Vitercik, and Yinyu Ye. Wait-Less Offline Tuning and Re-solving for Online Decision Making. *International Conference on Machine Learning (ICML)*.
- 4. (2025) Haotian Zhai, Connor Lawless, Ellen Vitercik, and Liu Leqi. EquivaMap: Leveraging LLMs for Automatic Equivalence Checking of Optimization Formulations. *International Conference on Machine Learning (ICML)*.
- 5. (2025) Connor Lawless, Yingxi Li, Anders Wikum, Madeleine Udell, and Ellen Vitercik. LLMs for Cold-Start Cutting Plane Separator Configuration. *Conference on the Integration of Constraint Programming, Artificial Intelligence, and Operations Research (CPAIOR)*.
- 6. (2025) Siddharth Prasad, Ellen Vitercik, Maria-Florina Balcan, and Tuomas Sandholm. New Sequence-Independent Lifting Techniques for Cutting Planes and When They Induce Facets. *International Joint Conference on Artificial Intelligence (IJCAI)*.
- 7. (2024) Joon Suk Huh, Ellen Vitercik, and Kirthevasan Kandasamy. Bandit Profit-Maximization for Targeted Marketing. *ACM Conference on Economics and Computation (EC)*.
- 8. (2024) Alexandre Hayderi, Amin Saberi, Ellen Vitercik, and Anders Wikum. MAGNOLIA: Matching Algorithms via GNNs for Online Value-to-Go Approximation. *International Conference on Machine Learning (ICML)*.
- 9. (2023) Wenshuo Guo, Nika Haghtalab, Kirthevasan Kandasamy, and Ellen Vitercik. Leveraging Reviews: Learning to Price with Buyer and Seller Uncertainty. *ACM Conference on Economics and Computation (EC)*.
- 10. (2023) Christian Borgs, Jennifer Chayes, Christian Ikeokwu, and Ellen Vitercik. Disincentivizing Polarization in Social Networks. *ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization (EAAMO)*.
- 11. (2022) Maria-Florina Balcan, Siddharth Prasad, Tuomas Sandholm, and Ellen Vitercik. Structural Analysis of Branch-and-Cut and the Learnability of Gomory Mixed Integer Cuts. *Conference on Neural Information Processing Systems (NeurIPS)*.
- 12. (2022) Wenshuo Guo, Michael I. Jordan, and Ellen Vitercik. No-Regret Learning in Partially-Informed Auctions. *International Conference on Machine Learning (ICML)*.

- 13. (2022) Maria-Florina Balcan, Siddharth Prasad, Tuomas Sandholm, and Ellen Vitercik. Improved Sample Complexity Bounds for Branch-and-Cut. *International Conference on Principles and Practice of Constraint Programming (CP)*.
- 14. (2021) Maria-Florina Balcan, Siddharth Prasad, Tuomas Sandholm, and Ellen Vitercik. Sample Complexity of Tree Search Configuration: Cutting Planes and Beyond. *Conference on Neural Information Processing Systems* (NeurIPS).
- 15. (2021) Ellen Vitercik and Tom Yan. Revenue Maximization via Machine Learning with Noisy Data. *Conference on Neural Information Processing Systems (NeurIPS)*.
- 16. (2021) Maria-Florina Balcan, Dan DeBlasio, Travis Dick, Carl Kingsford, Tuomas Sandholm, and Ellen Vitercik. How Much Data Is Sufficient to Learn High-Performing Algorithms? Generalization Guarantees for Data-Driven Algorithm Design. ACM Symposium on Theory of Computing (STOC).
- 17. (2021) Andrés Muñoz Medina, Umar Syed, Sergei Vassilvitskii, and Ellen Vitercik. Private Optimization without Constraint Violations. *International Conference on Artificial Intelligence and Statistics (AISTATS)*.
- 18. (2021) Maria-Florina Balcan, Tuomas Sandholm, and Ellen Vitercik. Generalization in Portfolio-Based Algorithm Selection. *AAAI Conference on Artificial Intelligence (AAAI)*.
- 19. (2020) Maria-Florina Balcan, Tuomas Sandholm, and Ellen Vitercik. Refined Bounds for Algorithm Configuration: The Knife-Edge of Dual Class Approximability. *International Conference on Machine Learning (ICML)*.
- 20. (2020) Maria-Florina Balcan, Tuomas Sandholm, and Ellen Vitercik. Learning to Optimize Computational Resources: Frugal Training with Generalization Guarantees. *AAAI Conference on Artificial Intelligence (AAAI)*.
- 21. (2019) Maria-Florina Balcan, Tuomas Sandholm, and Ellen Vitercik. Estimating Approximate Incentive Compatibility. *ACM Conference on Economics and Computation (EC)*.
- 22. (2019) Daniel Alabi, Adam Kalai, Katrina Ligett, Cameron Musco, Christos Tzamos, and Ellen Vitercik. Learning to Prune: Speeding Up Repeated Computations. *Conference on Learning Theory (COLT)*.
- 23. (2019) Christian Borgs, Jennifer Chayes, Nika Haghtalab, Adam Kalai, and Ellen Vitercik. Algorithmic Greenlining: An Approach to Increase Diversity. *AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society (AIES)*.
- 24. (2018) Maria-Florina Balcan, Travis Dick, and Ellen Vitercik. Dispersion for Data-Driven Algorithm Design, Online Learning, and Private Optimization. *IEEE Symposium on Foundations of Computer Science (FOCS)*.
- 25. (2018) Maria-Florina Balcan, Tuomas Sandholm, and Ellen Vitercik. A General Theory of Sample Complexity for Multi-Item Profit Maximization. *ACM Conference on Economics and Computation (EC)*.
- 26. (2018) Maria-Florina Balcan, Travis Dick, Tuomas Sandholm, and Ellen Vitercik. Learning to Branch. *International Conference on Machine Learning (ICML)*.

- 27. (2018) Bernhard Haeupler, Amirbehshad Shahrasbi, and Ellen Vitercik. Synchronization Strings: Channel Simulations and Interactive Coding for Insertions and Deletions. *International Colloquium on Automata, Languages and Programming (ICALP)*.
- 28. (2017) Maria-Florina Balcan, Vaishnavh Nagarajan, Ellen Vitercik, and Colin White. Learning-Theoretic Foundations of Algorithm Configuration for Combinatorial Partitioning Problems. *Conference on Learning Theory (COLT)*.
- 29. (2016) Maria-Florina Balcan, Tuomas Sandholm, and Ellen Vitercik. Sample Complexity of Automated Mechanism Design. *Conference on Neural Information Processing Systems (NeurIPS)*.
- 30. (2016) Maria-Florina Balcan, Ellen Vitercik, and Colin White. Learning Combinatorial Functions from Pairwise Comparisons. *Conference on Learning Theory (COLT)*.

# Refereed Conference/Symposia Proceedings Submitted

- 1. (2025) Vaggos Chatziafratis, Ishani Karmarkar, Yingxi Li, and Ellen Vitercik. Accelerating Data-Driven Algorithm Selection for Combinatorial Partitioning Problems.
- 2. (2025) Yu He, Ishani Karmarkar, and Ellen Vitercik. Overcoming Information Bottlenecks in Directed Graph Neural Networks through Rewiring.
- 3. (2025) Yu He, Yingxi Li, Colin White, and Ellen Vitercik. DSR-Bench: Evaluating the Structural Reasoning Abilities of LLMs via Data Structures.
- 4. (2025) Mika Jain, Stefanie Jegelka, Ishani Karmarkar, Luana Ruiz, and Ellen Vitercik. Graph Data Selection with GNN Performance Guarantees.
- 5. (2025) Yingxi Li, Ellen Vitercik, and Mingwei Yang. Smoothed Analysis of Online Metric Matching with a Single Sample: Beyond Metric Distortion.

#### Presentations

# **Invited Plenary Talks and Distinguished Lectures**

- 1. (2022) Automated Algorithm and Mechanism Configuration. ACM Conference on Economics and Computation (EC), SIGecom Doctoral Dissertation Award.
- 2. (2019) Early Career Invited Lecture Award. University of British Columbia, Faculty of Science.

#### **Other Invited Presentations**

- 1. (2025) Machine Learning for Discrete Optimization: Theoretical Foundations. Simons Workshop on Graph Learning Meets Theoretical Computer Science.
- 2. (2025) Online Matching with Graph Neural Networks. Workshop on Algorithms, Learning, and Games (ALGA).
- 3. (2025) Machine Learning for Online Matching and Integer Programming. Dagstuhl Seminar on Learned Predictions for Data Structures and Running Time.

- 4. (2024) Online Matching with Graph Neural Networks. Banff International Research Station, New Directions in Machine Learning Theory Workshop.
- 5. (2024) Online Matching with Graph Neural Networks. YinzOR Conference (featured speaker).
- 6. (2024) Online Matching with Graph Neural Networks. Toyota Technological Institute at Chicago, Workshop on Learning-Augmented Algorithms.
- 7. (2024) Online Matching with Graph Neural Networks. Summer Workshop on Innovations in Management Science (SWIMS).
- 8. (2024) From Large to Small Datasets: Size Generalization for Clustering Algorithm Selection. International Symposium on Mathematical Programming (ISMP).
- 9. (2024) From Large to Small Datasets: Size Generalization for Clustering Algorithm Selection. AAAI Workshop on Artificial Intelligence for Operations Research.
- 10. (2024) Leveraging Reviews: Learning to Price with Buyer and Seller Uncertainty. Simons Institute, Data-Driven Decision Processes Reunion.
- 11. (2023) Leveraging Reviews: Learning to Price with Buyer and Seller Uncertainty. INFORMS Annual Meeting.
- 12. (2023) Leveraging Reviews: Learning to Price with Buyer and Seller Uncertainty. Cornell Tech, Urban Tech Workshop.
- 13. (2023) Leveraging Reviews: Learning to Price with Buyer and Seller Uncertainty. Institute for Pure and Applied Mathematics (IPAM), Workshop on Artificial Intelligence and Discrete Optimization.
- 14. (2023) Machine Learning for Algorithm Design. Stanford University, CS & EE New Research Directions Workshop.
- 15. (2022) Machine Learning for Algorithm Design. Simons Institute, Data-Driven Decision Processes Boot Camp.
- 16. (2022) Generalization Guarantees for Multi-Item Profit Maximization: Pricing, Auctions, and Randomized Mechanisms. Google, Mountain View, Search-Ads Spotlight Series.
- 17. (2022) Theoretical Foundations of Machine Learning for Cutting Plane Selection. Stanford University, Women's Theory Forum.
- 18. (2022) Machine Learning for Tree Search Configuration: Cutting Planes and Beyond. Simons Foundation Symposium on New Directions in Theoretical Machine Learning.
- 19. (2022) Estimating Approximate Incentive Compatibility. Workshop on Algorithmic Game Theory: Past, Present, and Future (Workshop for Noam Nisan's 60th Birthday).
- 20. (2022) Sample Complexity of Tree Search Configuration: Cutting Planes and Beyond. AAAI Workshop on Machine Learning for Operations Research.
- 21. (2022) Sample Complexity of Tree Search Configuration: Cutting Planes and Beyond. STOC Workshop on Algorithms with Predictions.

- 22. (2022) Private Optimization Without Constraint Violations. Workshop on Algorithms for Learning and Economics (WALE).
- 23. (2022) Data-Driven Auction Design. Miller Institute, UC Berkeley.
- 24. (2021) Theoretical Foundations of Data-Driven Algorithm Design. Google, Learning Theory Workshop.
- 25. (2021) How Much Data is Sufficient to Learn High-Performing Algorithms? Machine Learning for Algorithms Workshop, Foundations of Data Science Institute.
- 26. (2021) How Much Data is Sufficient to Learn High-Performing Algorithms? IPAM Workshop on Deep Learning and Combinatorial Optimization.
- 27. (2021) Generalization Guarantees for Multi-Item Profit Maximization: Pricing, Auctions, and Randomized Mechanisms. INFORMS Annual Meeting.
- 28. (2021) Automated Parameter Optimization for Integer Programming. ICML Workshop on AutoML.
- 29. (2020) How Much Data is Sufficient to Learn High-Performing Algorithms? NeurIPS Workshop on Learning Meets Combinatorial Algorithms.
- 30. (2020) Estimating Approximate Incentive Compatibility. Tel-Aviv University, Young Researcher Workshop on Economics and Computation.
- 31. (2019) Estimating Approximate Incentive Compatibility. INFORMS Annual Meeting.
- 32. (2019) Estimating Approximate Incentive Compatibility. EC Workshop on Machine Learning in the Presence of Strategic Behavior.
- 33. (2019) Learning to Branch. Cornell ORIE Young Researchers Workshop.
- 34. (2019) A General Theory of Sample Complexity for Multi-Item Profit Maximization. EC ACM/INFORMS Workshop on Market Design.
- 35. (2018) A General Theory of Sample Complexity for Multi-Item Profit Maximization. INFORMS Annual Meeting.
- 36. (2018) A General Theory of Sample Complexity for Multi-Item Profit Maximization. China Theory Week.
- 37. (2018) A General Theory of Sample Complexity for Multi-Item Profit Maximization. AAMAS-IJCAI Workshop on Agents and Incentives in Artificial Intelligence.
- 38. (2018) Learning-Theoretic Foundations of Algorithm Configuration for Combinatorial Partitioning Problems. INFORMS Annual Meeting.
- 39. (2018) Dispersion for Data-Driven Algorithm Design, Online Learning, and Private Optimization. Northwestern Quarterly Theory Workshop.
- 40. (2017) Sample Complexity of Multi-Item Profit Maximization. Dagstuhl Workshop on Game Theory Meets Computational Learning Theory.

- 41. (2017) Sample Complexity of Multi-Item Profit Maximization. ACM EC Workshop on Algorithmic Game Theory and Data Science.
- 42. (2017) Differentially Private Algorithm and Auction Configuration. Carnegie Mellon University, Theory Lunch.
- 43. (2017) Foundations of Application-Specific Algorithm Configuration. MIT, Machine Learning Tea.
- 44. (2017) Foundations of Application-Specific Algorithm Configuration. Microsoft Research New England, Machine Learning Lunch.
- 45. (2016) Foundations of Application-Specific Algorithm Configuration. Carnegie Mellon University, AI Lunch.

### **Contributed Conference Presentations**

- 1. (2021) How Much Data is Sufficient to Learn High-Performing Algorithms? ACM Symposium on Theory of Computing (STOC).
- 2. (2021) Private Optimization without Constraint Violations. International Conference on Artificial Intelligence and Statistics (AISTATS).
- 3. (2021) Generalization in Portfolio-Based Algorithm Selection. AAAI Conference on Artificial Intelligence.
- 4. (2020) Refined Bounds for Algorithm Configuration: The Knife-Edge of Dual Class Approximability. International Conference on Machine Learning (ICML).
- 5. (2019) Estimating Approximate Incentive Compatibility. ACM Conference on Economics and Computation (EC).
- 6. (2019) Learning to Prune: Speeding up Repeated Computations. Conference on Learning Theory (COLT).
- 7. (2018) Learning to Branch. International Conference on Machine Learning (ICML).
- 8. (2018) A General Theory of Sample Complexity for Multi-Item Profit Maximization. ACM Conference on Economics and Computation (EC).
- 9. (2016) Learning Submodular Functions from Pairwise Comparisons. Conference on Learning Theory (COLT).

#### **Department Seminars**

- 1. (2025) Machine Learning for Discrete Optimization: Theoretical Foundations. University of Massachusetts Amherst, Computer Science Theory Seminar.
- 2. (2025) Size Generalization in Learning-Augmented Optimization. Johns Hopkins University, Applied Mathematics and Statistics Seminar.
- 3. (2024) From Large to Small Datasets: Size Generalization for Clustering Algorithm Selection. Massachusetts Institute of Technology, Theory of Computing Colloquium.

- 4. (2024) From Large to Small Datasets: Size Generalization for Clustering Algorithm Selection. Oregon State University, AI Seminar.
- 5. (2024) From Large to Small Datasets: Size Generalization for Clustering Algorithm Selection. Stanford University, Information Systems Laboratory Colloquium.
- 6. (2023) Leveraging Reviews: Learning to Price with Buyer and Seller Uncertainty. Stanford Graduate School of Business, Operations, Information & Technology Seminar.
- 7. (2023) Leveraging Reviews: Learning to Price with Buyer and Seller Uncertainty. University of Wisconsin–Madison, Systems, Information, Learning and Optimization Seminar.
- 8. (2023) Leveraging Reviews: Learning to Price with Buyer and Seller Uncertainty. University of Chicago Booth School of Business, Operations Seminar.
- 9. (2023) Leveraging Reviews: Learning to Price with Buyer and Seller Uncertainty. University of Massachusetts Amherst, CS Theory Seminar.
- 10. (2023) Leveraging Reviews: Learning to Price with Buyer and Seller Uncertainty. Stanford University, Statistics Seminar.
- 11. (2022) How Much Data is Sufficient to Learn High-Performing Algorithms? University of Massachusetts Amherst, Algorithms with Predictions Seminar.
- 12. (2021) How Much Data is Sufficient to Learn High-Performing Algorithms? Worcester Polytechnic Institute, Computer Science Colloquium.
- 13. (2021) How Much Data is Sufficient to Learn High-Performing Algorithms? Purdue University, Theory Seminar.
- 14. (2021) Integrating Machine Learning into Algorithm Design. University of Texas at Austin, Computer Science Seminar.
- 15. (2021) Integrating Machine Learning into Algorithm Design. New York University, Computer Science Colloquium.
- 16. (2021) Integrating Machine Learning into Algorithm Design. Columbia University, Computer Science Colloquium.
- 17. (2021) Integrating Machine Learning into Algorithm Design. University of British Columbia, Computer Science Seminar.
- 18. (2021) Integrating Machine Learning into Algorithm Design. University of Waterloo, Computer Science Seminar.
- 19. (2021) Integrating Machine Learning into Algorithm Design. Harvard University, Computer Science Colloquium.
- 20. (2021) Integrating Machine Learning into Algorithm Design. Princeton University, Computer Science Colloquium.
- 21. (2021) Integrating Machine Learning into Algorithm Design. University of California, Los Angeles, Computer Science Seminar.

- 22. (2021) Integrating Machine Learning into Algorithm Design. California Institute of Technology, Frontiers in Computing and Mathematical Sciences Symposium.
- 23. (2021) Integrating Machine Learning into Algorithm Design. Massachusetts Institute of Technology, Sloan Operations Research and Statistics Seminar.
- 24. (2021) Integrating Machine Learning into Algorithm Design. Stanford University, Management Science & Engineering Seminar.
- 25. (2021) Integrating Machine Learning into Algorithm Design. Georgia Institute of Technology, School of Computer Science Seminar.
- 26. (2021) Integrating Machine Learning into Algorithm Design. Microsoft Research New England, Seminar.
- 27. (2020) Integrating Machine Learning into Algorithm Design. Columbia University, Industrial Engineering and Operations Research Seminar.
- 28. (2020) How Much Data is Sufficient to Learn High-Performing Algorithms? Stanford University, CS Theory Lunch.
- 29. (2020) How Much Data is Sufficient to Learn High-Performing Algorithms? Columbia University, Theory Seminar.
- 30. (2019) Estimating Approximate Incentive Compatibility. Carnegie Mellon University, Theory Lunch.
- 31. (2017) Sample Complexity of Multi-Item Profit Maximization. Harvard University, Economics and CS Research Seminar.
- 32. (2016) Sample Complexity of Automated Mechanism Design. University of Pennsylvania, Theory Lunch.

# STUDENTS AND POSTDOCTORAL RESEARCHERS SUPERVISED

#### Ph.D. Students

#### Current

- Yu He; advised by Ellen Vitercik.
- Mika Jain; Ellen Vitercik and Greg Valiant, Professor of Computer Science, serve equally as co-advisors.
- Nikil Selvam; Ellen Vitercik and Sanmi Koyejo, Assistant Professor of Computer Science, serve equally as co-advisors.
- Yingxi Li; advised by Ellen Vitercik.
- Anders Wikum; advised by Ellen Vitercik.
- Ishani Karmarkar; primary advisor is Aaron Sidford, Associate Professor of Management Science and Engineering; Ellen Vitercik serves as secondary advisor.

#### Postdoctoral Researchers

#### Current

- Nico Christianson; Ellen Vitercik and Ram Rajagopal, Associate Professor of Civil and Environmental Engineering, serve equally as co-advisors.
- Xizhi Tan; Ellen Vitercik, Aviad Rubenstein, Associate Professor of Computer Science, and Amin Saberi, Professor of Management Science and Engineering, serve equally as co-advisors.
- Connor Lawless; Ellen Vitercik and Madeleine Udell, Assistant Professor of Management Science and Engineering, serve equally as co-advisors.

# Masters Students (with refereed publications)

#### Former

- Jingruo Sun. Management Science & Engineering. Graduation: 2025.
- Alexandre Hayderi. Computer Science. Graduation: 2024.

#### Professional Activities

# Journal Editing

- Associate Editor, INFORMS Journal on Computing (2024–present)
- Action Editor, Transactions on Machine Learning Research (TMLR) (2024–present)

# Workshop and Tutorial Organization

- Tutorial Organizer & Presenter, "Machine Learning for Discrete Optimization: Theoretical Guarantees and Applied Frontiers," AAAI Conference on Artificial Intelligence (2024)
- Workshop Co-organizer, "New Directions in Machine Learning Theory," Banff International Research Station (2024)
- Tutorial Organizer & Presenter, "Machine Learning for Algorithm Design: Theoretical Guarantees and Applied Frontiers," Cargese–Porquerolles Workshop on Combinatorial Optimization (2023)
- Workshop Co-organizer, "Sampling and Optimization in Discrete Space," ICML (2023)
- Tutorial Co-Organizer & Presenter, "Automated Mechanism Design for Pricing and Auctions," AAAI, ACM Symposium on Theory of Computing (STOC), and ACM Conference on Economics and Computation (EC) (2018–2021)

# **Conference Leadership Roles**

- Program Committee Chair, Learning on Graphs Conference (LoG) (2025)
- Workshop Chair, ACM Conference on Economics and Computation (EC) (2024–2025)

# **Program Committees Roles**

- Senior Program Committee, Conference on Learning Theory (COLT) (2024, 2025)
- Area Chair, International Conference on Machine Learning (ICML) (2024)
- Session Chair, INFORMS Annual Meeting (2018, 2025)

# Memberships & Affiliations

• Co-founder, Learning Theory Alliance (2021–present)

# University and Departmental Service

- Co-organizer, RAIN (Research on Algorithms and Incentives in Networks) Seminar (2025-present)
- Rising Stars in Data Science Faculty Committee Member (2025)
- Ph.D. Admissions Committee Member Computer Science Department (2022, 2024)
- Faculty Search Committee Member, Management Science & Engineering Department (2023)