

Stanford



Ellen Vitercik

Assistant Professor of Management Sciences and Engineering and of
Computer Science

Management Science and Engineering

Bio

ACADEMIC APPOINTMENTS

- Assistant Professor, Management Science and Engineering
- Assistant Professor, Computer Science

LINKS

- <https://vitercik.github.io/>: <https://vitercik.github.io/>

Teaching

COURSES

2025-26

- AI for Algorithmic Reasoning and Optimization: CS 331X, MS&E 331 (Aut)
- Design and Analysis of Algorithms: CS 161 (Win)
- Introduction to Probability: MS&E 120 (Aut)

2024-25

- Beyond Worst-Case Analysis: CS 264, MS&E 215 (Spr)
- Introduction to Probability: MS&E 120 (Aut)

2023-24

- Introduction to Probability: MS&E 120 (Aut)
- Machine Learning for Discrete Optimization: CS 225, MS&E 236 (Spr)

2022-23

- Introduction to Probability: MS&E 120 (Aut)
- Machine Learning for Algorithm Design: CS 331, MS&E 331 (Spr)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Samuel Akinwande, Shaun Datta, Zach Robertson, Akshay Sreekumar

Postdoctoral Faculty Sponsor

Nico Christianson, Connor Lawless, Xizhi Tan

Doctoral Dissertation Advisor (AC)

Yingxi Li, Anders Wikum

Master's Program Advisor

Nikita Bhardwaj, Megha Bindiganavale, Pranshu Chaturvedi, David Chen, Ian Chen, Kevin Chen, Sohan Chundurur, Jason Hu, Aliyan Ishfaq, Dilnaz Kamalova, Shreyas Kar, Chengnan Li, Wanning Lu, Auddithio Nag, Ron Polonsky, Ryan Tan, Claire Tang, Matthew Torre, Artemis Veizi

Doctoral Dissertation Co-Advisor (AC)

Mika Jain, Ishani Karmarkar, Nikil Selvam

Undergraduate Major Advisor

Ion Martinis

Doctoral (Program)

Yu He, Senem Isik, Henry Robbins

Publications

PUBLICATIONS

- **LLMs for Cold-Start Cutting Plane Separator Configuration**
Lawless, C., Li, Y., Wikum, A., Udell, M., Vitercik, E.
edited by Tack, G.
SPRINGER INTERNATIONAL PUBLISHING AG.2025: 51-69
- **New Sequence-Independent Lifting Techniques for Cover Inequalities and When They Induce Facets**
Prasad, S., Vitercik, E., Balcan, M., Sandholm, T.
edited by Kwok, J.
IJCAI-INT JOINT CONF ARTIF INTELL.2025: 2675-2683
- **How Much Data Is Sufficient to Learn High-Performing Algorithms?** *JOURNAL OF THE ACM*
Balcan, M., Deblasio, D., Dick, T., Kingsford, C., Sandholm, T., Vitercik, E.
2024; 71 (5)
- **Leveraging Reviews: Learning to Price with Buyer and Seller Uncertainty** *ACM SIGECOM EXCHANGES*
Guo, W., Haghtalab, N., Kandasamy, K., Vitercik, E.
2024; 22 (1): 74-82
- **Learning to Branch: Generalization Guarantees and Limits of Data-Independent Discretization** *JOURNAL OF THE ACM*
Balcan, M., Dick, T., Sandholm, T., Vitercik, E.
2024; 71 (2)
- **Generalization Guarantees for Multi-Item Profit Maximization: Pricing, Auctions, and Randomized Mechanisms** *OPERATIONS RESEARCH*
Balcan, M., Sandholm, T., Vitercik, E.
2023
- **No-Regret Learning in Partially-Informed Auctions**
Guo, W., Jordan, M. I., Vitercik, E., Chaudhuri, K., Jegelka, S., Song, L., Szepesvari, C., Niu, G., Sabato, S.
JMLR-JOURNAL MACHINE LEARNING RESEARCH.2022