Aras Selvi

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Education

Imperial College London, London, UK

Ph.D., Operations Research   2024 (Expected)
  Supervisor: Wolfram Wiesemann
  Fellowship: The Alan Turing Institute 2022-23 Enrichment Placement
M.Res., Operations Research and Business Analytics (Distinction)   2020
  Awards: Dean's List for Academic Excellence

Tilburg University, Tilburg, The Netherlands

M.Res., Operations Research (Cum Laude)   2019

Ozyegin University, Istanbul, Turkey

B.Sc., Industrial Engineering (High Honor)   2017
  Awards: Dean's List, ranked 2nd among 125 Faculty of Engineering graduates
  Exchange: Queensland University of Technology, Brisbane, Australia
Minor, Computer Science (High Honor)

Research Interests

Topics: Robust optimization, robust learning, decision making under uncertainty, computational privacy
Methodologies: Optimization theory & algorithms, convex analysis, learning theory, information theory

Research Papers

Published Work

Selvi, A., Ben-Tal, A., Brekelmans, R., & Den Hertog, D. (2022). Convex maximization via adjustable robust optimization. **INFORMS Journal on Computing** 34(4):2091-2105. Available on [Optimization Online]
  - Winner of the 2021 INFORMS Computing Society Best Student Paper Award [Link]

Selvi, A., Den Hertog, D., & Wiesemann, W. (2021). A reformulation-linearization technique for optimization over simplices. Forthcoming in **Mathematical Programming**. Available on [Optimization Online], [Springer]

Selvi, A., Belbasi, R, Haugh M., & Wiesemann, W. (2022). Wasserstein Logistic Regression with Mixed Features. **NeurIPS22**. Available on [Optimization Online], [NeurIPS conference page]

Roebers, L. M., **Selvi, A.**, & Vera, J. C. (2019). Using column generation to solve extensions to the Markowitz model. **The Engineering Economist**, 64(3):275-288. Available on [arXiv], [Taylor & Francis]

Under Review & Working Papers

Selvi, A., Liu, H., & Wiesemann, W. (2022). Differential privacy via distributionally robust optimization. Under Review.

Selvi, A., Ben-Tal, A., & Wiesemann, W. (2022). Maximizing the sum of maxima of convex functions.

Belbasi, R, **Selvi, A.**, Haugh M., & Wiesemann, W. (2023). Cutting-plane methods for Wasserstein classification.

Wang, Z., **Selvi, A.**, Peura, H., Mikolon, S., & Wiesemann, W. (2023). Assortment optimization for donation collecting nonprofit organizations.

Awards

  - PhD Placement Award: 9-month placement (starting October 2022) at **The Alan Turing Institute** HQ in London, with a £1,500 financial allowance and £472.5 monthly stipends to support research
  - NeurIPS 2022 Scholar Award: Complimentary in-person registration and Hotel stay to attend the conference
  - Winner: **2021 INFORMS Computing Society Best Student Paper Award**
  - Honorable Mention: **2019 INFORMS O.R. & Analytics Student Team Competition**
  - Outstanding Reviewer, Complimentary Registration: ICML 2022, ICLR 2022
  - President's Address 2022 Awardee: Named by Imperial College London president for global contributions

- Dean's List: Imperial College London, Ozyegin University
- Dean's Reception 2022: Invite-only event by the Dean of Imperial College Business School
- Undergraduate Scholarship: Ozyegin University Performance Scholarship (awarded to three students)
- Alumni Award: one of the 20 alumni who made a notable contribution to Ozyegin University (2019)
- Graduate Scholarship: Tilburg University Koopmans Scholarship, Imperial College Business School Funding

Attended Conferences

- Thirty-sixth Conference on Neural Information Processing Systems (New Orleans, USA)	December, 2022
- PhD Winter School: Data Science, Optimization and Operations Research (Zinal, CH)	January, 2022
- The Operational Research Society Annual Conference OR63 (Virtual)	September, 2021
- Tenth International Conference on Learning Representations (Virtual)	April, 2022
- Thirty-ninth International Conference on Machine Learning (Virtual)	July, 2022

Invited Talks

- QuantumBlack - A McKinsey Company (London, UK)	June, 2022
- Imperial College Operations Research PhD Seminar (London, UK)	May, 2022
- BCG GAMMA (London, UK)	May, 2022
- INFORMS Computing Society Conference (Tampa, USA)	January, 2022
- Imperial-LBS-UCL Brown Bag Seminar Series (Virtual, UK)	January, 2021
- Robust Optimization Webinars (Virtual)	July, 2020
- INFORMS Business Analytics Conference (Austin, USA)	April, 2019

Teaching Experiences

Imperial College London

Teaching assistant for masters and MBA courses

- Mathematics and Statistics (MSc Business Analytics, MSc Business Analytics online)	2020-2023
- Optimisation and Decision Models (MSc Business Analytics online)	2021-2023
- Fundamentals of Database Technologies (MSc Business Analytics online)	2021
- Machine Learning (MSc Business Analytics online)	2021
- Big Data, AI & Machine Learning (MBA)	2021-2022
- Data Structures and Algorithms with Python (MSc Fintech, MSc RMFE, MSc Business Analytics)	2021
- Centre for Process Systems Engineering Optimisation Course for Professionals	2020

London Business School

Teaching assistant for masters and MBA courses

- Data Science for Business Analytics and Management (Masters in Analytics and Management)	2020-2022
- Data Mining for Business Intelligence (MBA)	2021
- Applied Statistics (Masters in Analytics and Management)	2022
- Data Analytics for Managers (MBA & MiM)	2022

London School of Economics

Class teacher for masters courses

- Algorithmic Techniques for Data Mining (MSc Applied Mathematics, MSc Operations Research)	2019-2022

Emeritus

Subject matter expert for online certificate course

- ICBS Professional Certificate in Machine Learning and Artificial Intelligence	2021-2022

Tilburg University

Teaching assistant for masters and undergraduate courses

- Mathematics (BSc Social Sciences)	2019
- Decision Making for Business Analytics (MSc Business Analytics and Operations Reseach)	2018

Ozyegin University

Teaching assistant for undergraduate courses

- Operations Research I (BSc Industrial Engineering)	2017
- Productions Systems Analysis (BSc Industrial Engineering)	2017
- Physics 102 (All Engineering Undergraduates)	2016

Skills

Programming: Python, Julia, MATLAB, C++, R, Optimization Solvers, Machine Learning Packages, SQL, LaTeX
Language: Turkish (Native), Armenian (Native), English (Advanced), German (Beginner)

Memberships & Fellowships

- Fellow: Imperial Business Analytics, Data Science Institute (DSI)
- Member: Computational Optimisation Group of Department of Computing (Imperial College London)
- (Past) Board member: Graduate Student Society and MRes Education Committee of Tilburg University

Service

- Reviewer: Management Science, Manufacturing & Service Operations Management, SIAM Journal on Optimization, INFORMS Journal on Computing, Mathematical Programming Computation, Computational Management Science, Optimization Letters, Operations Research Letters, European Journal of Operations Research
- Conference Reviewer: ICLR (2022, highlighted reviewer), NeurIPS (2021, 2022), AISTATS (2022, 2023), ICML (2022, outstanding reviewer, invited as a session chair)
- Academic Ambassador of Imperial College London's PhD Programme in Operations Research
- Member of INFORMS and The Operational Research Society
- (Past) Volunteer instructor: Robin Code Turkey, Dreams Academy Istanbul, Hour of Code

Industry Experience & Summer Internships

Academic mentor on Data Spark Programme: KPMG UK, Chatham House (London, UK)	2019-2021
Pro bono consultant on analytics, major nonprofit organisation (confidential due to NDA)	2021-2023
Intern, Coca-Cola Icecek HQ (Istanbul, Turkey)	Summer 2015-2016
Intern, Metro Cash & Carry (Istanbul, Turkey)	Summer 2016
Intern, Fiba Factoring (Istanbul, Turkey)	Summer 2014
Intern, Anchor Grup (Bucharest, Romania)	Spring 2014

Last updated October 8, 2022.