


Alexandros Tsigonias-Dimitriadis

CONTACT INFORMATION

European Central Bank, Sonnemannstr. 20, 60314 Frankfurt am Main, Germany
alexandrostsigidim@gmail.com | <https://alextsigonias.github.io/> | LinkedIn: 

SUMMARY

Data scientist and researcher with a strong background in Computer Science and Applied Mathematics and a proven track record of applying tools from a wide range of disciplines, including algorithms, optimization, machine learning, statistics, and economics in both practical and research contexts. My research has been published in leading conferences and journals across operations research, economics and computation, and algorithms.

EMPLOYMENT

European Central Bank, Germany

Graduate Programme Participant

Sept. 2024 -

- Selected among 15 out of 1400+ applicants to take up two one-year assignments in two business areas and a research project to submit at the end of the second year.
- 1st year assignment in *Risk Management*; 2nd year in *Information Systems/Software Engineering*.

Data Scientist

July 2024 - August 2024

PhD Trainee in Data Science & Analytics

July 2023 - June 2024

- Worked with a variety of datasets and statistical methods to inform and evaluate the impact of the ECB's communication to general and specialized audiences.
- Carried out and supervised research projects on central banking communication and other topics in computational social science, using natural language processing and econometric methods.
- Worked on software and engineering related tasks, such as building the data architecture of the team and implementing a tag management system from scratch.

Universidad de Chile, Chile

Aug. 2022 - July 2023

Postdoctoral Researcher, Department of Industrial Engineering

Information and Computation in Market Design (ICMD) Group

- Worked on resource allocation problems arising in online markets and platforms. Topics included fairness considerations in recommendation systems, optimization aspects of political apportionment, sequential decision-making and pricing.
- Collaborated with researchers from academia and industry (Google, Meta). Was invited by the Algorithms & Optimization team of Google Research Zurich for in-person collaboration.

EDUCATION

Technical University of Munich, Germany

Sept. 2018 - July 2022

Ph.D. in Mathematics, TUM School of Computation, Information and Technology

Completed an interdisciplinary PhD program with specialization in *Operations Research*.

Thesis: Lotteries, Prophets, and Pandora's Box: A New Take on Classic Problems in Mechanism Design and Online Selection

Advisor: Prof. Andreas S. Schulz

National Technical University of Athens, Greece

Oct. 2012 - June 2018

Diploma (BSc & MEng) in Electrical and Computer Engineering

GPA: 8.88/10 (top 7%)

Major in Computer Science, Minor in Mathematics & Computer Networks

Thesis: Analysis of Opinion Formation Dynamics using Convex Optimization Techniques

Advisor: Prof. Dimitris Fotakis

	Technical University of Munich, Germany Erasmus semester, Department of Electrical and Computer Engineering	Apr. - Sept. 2016
RESEARCH VISITS & INTERNSHIPS	<p>Google Research, Switzerland <ul style="list-style-type: none"> Hosted by Dr. Paul Duetting in the Algorithms & Optimization team and worked on market algorithms. Designed algorithms for a stochastic matching problem with applications in pricing. </p> <p>Sapienza Università di Roma, Italy Host: Prof. Stefano Leonardi</p> <p>Universidad de Chile, Chile Host: Prof. José Correa</p>	<p>May - July 2023</p> <p>Mar. 2022</p> <p>Nov. - Dec. 2019</p>
AWARDS & SCHOLARSHIPS	<p>COST Action STSM Grant Funding from the COST Action for research visit at the Sapienza University of Rome</p> <p>DFG-AdONE start-up funding Funding from the German Research Foundation (DFG) for talented early career researchers</p> <p>IGSSE PhD Scholarship</p>	<p>2022</p> <p>2021-22</p> <p>2018-21</p>
CODING & SOFTWARE	<p>Programming: Python, R, SQL, Bash, JavaScript, C/C++, Matlab, Java Software and Tools: Pytorch, Gurobi, Git, HuggingFace, \LaTeX, Mathematica, PowerBI</p>	
JOURNAL ARTICLES (Authors are listed alphabetically)	<p><i>Prophet Secretary Against the Online Optimal</i> Paul Dütting, Evangelia Gergatsouli, Rojin Rezvan, Yifeng Teng, Alexandros Tsigonias-Dimitriadis <i>Minor revision, Mathematics of Operations Research</i> A preliminary version appeared in <i>EC'23</i></p> <p><i>The Secretary Problem with Independent Sampling</i> José Correa, Andrés Cristi, Laurent Feuilloley, Tim Oosterwijk, Alexandros Tsigonias-Dimitriadis Management Science, <i>Articles in Advance</i> A preliminary version appeared in <i>SODA'21</i></p> <p><i>Robust Revenue Maximization Under Minimal Statistical Information</i> Yiannis Giannakopoulos, Diogo Poças, Alexandros Tsigonias-Dimitriadis ACM Transactions on Economics and Computation (ACM TEAC) An extended abstract appeared in <i>WINE'20</i></p>	<p>2022</p> <p>2024</p> <p>2022</p>
CONFERENCE PUBLICATIONS (Authors are listed alphabetically)	<p><i>Prophet Inequalities via the Expected Competitive Ratio</i> Tomer Ezra, Stefano Leonardi, Rebecca Reiffenhäuser, Matteo Russo, Alexandros Tsigonias-Dimitriadis 19th Conference on Web and Internet Economics (WINE'23)</p> <p><i>Prophet Secretary Against the Online Optimal</i> Paul Dütting, Evangelia Gergatsouli, Rojin Rezvan, Yifeng Teng, Alexandros Tsigonias-Dimitriadis 24th ACM Conference on Economics and Computation (EC'23)</p> <p><i>The Secretary Problem with Independent Sampling</i> José Correa, Andrés Cristi, Laurent Feuilloley, Tim Oosterwijk, Alexandros Tsigonias-Dimitriadis</p>	

32nd ACM-SIAM Symposium on Discrete Algorithms (SODA'21)

Robust Revenue Maximization Under Minimal Statistical Information

Yiannis Giannakopoulos, Diogo Poças, Alexandros Tsigonias-Dimitriadis

16th Conference on Web and Internet Economics (WINE'20)

SUBMITTED &
WORKING PAPERS

New Combinatorial Insights for Monotone Apportionment

Javier Cembrano, José Correa, Ulrike Schmidt-Kraepelin, Alexandros Tsigonias-Dimitriadis, Victor Verdugo

Submitted

Online Policies for Content Recommendation with Fairness Constraints

José Correa, Émile Naquin, Nicolás Stier-Moses, Alexandros Tsigonias-Dimitriadis, Victor Verdugo

In preparation for submission

Prophet Inequalities via the Expected Competitive Ratio

Tomer Ezra, Stefano Leonardi, Rebecca Reiffenhäuser, Matteo Russo, Alexandros Tsigonias-Dimitriadis

Major revision, ACM Transactions on Economics and Computation

Preference Elicitation in Combinatorial Auctions: An Improved Approach using Reinforcement Learning

Eleni Batziou, Giorgos Bouritsas, Alexandros Tsigonias-Dimitriadis

Working paper

PROFESSIONAL
SERVICE

Conference & Journal reviewing: NeurIPS'23, ICML'23, Math. Programming

Conference subreviewing: COLT'23, IPCO'23, SODA'23, SAGT'22, EC'22

Volunteer, STOC 2022

Organizer of the AdONE research group retreat

2020

TEACHING &
SUPERVISION

European Central Bank & Barcelona School of Economics

Co-supervisor, Master thesis in Data Science

Spring 2024

Technical University of Munich, Germany

Teaching Assistant, Special Topics in Algorithmic Game Theory

Co-supervisor of two Master theses in the Department of Mathematics

Spring 2019

National Technical University of Athens, Greece

Teaching Assistant, Algorithms and Complexity

Fall 2017

Private Tutor, Athens, Greece

Mathematics and Physics for high school students

2013 - 2016

LANGUAGES

English (fluent), Greek (native), Spanish (fluent), German (advanced), French (basic)