Curriculum Vitae

Olga Kuryatnikova
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Academic work experience

Oct 2020 – present	**Assistant professor**, Erasmus University Rotterdam Erasmus School of Economics, Department of Econometrics *Research: solution approaches and approximation algorithms for non-linear problems* *Main applications: optimization for networks and markets, e.g., energy, water* *Bachelor's and master's teaching and thesis supervision*
Oct 2019 – Oct 2020	**Postdoctoral fellow**, University of Western Ontario Ivey Business School *Solution approaches for non-linear problems in energy network optimization*
Sep 2015 – May 2019	**Researcher and teacher**, Tilburg University TiSEM, Department of Econometrics & Operations Research *Polynomial optimization, convex and conic optimization*

Industrial work experience

Apr 2014 – July 2014	**Intern in the department of finance & control**, Sociale Verzekeringsbank (institution that implements national insurance schemes in the Netherlands) *Built an econometric model of the demand for social assistance for retirees*
June 2011 – Aug 2013	**Credit risk analyst in the department of corporate ratings**, Expert RA (rating agency in Russia) *Developed rating methodologies and conducted rating analysis for pension funds, industrial companies and sovereign issuers*

Education

Sep 2015 – Sep 2019	**PhD in Operations Research**, Tilburg University *Thesis: The many faces of positivity to approximate structured optimization problems* *Supervisors: J.C. Vera, R. Sotirov, L.F. Zuluaga*
Aug 2013 – Aug 2015	**MSc in Econometrics and Operations Research**, Tilburg Uni. (cum laude)
Aug 2010 – May 2012	**MSc in Economics**, Higher School of Economics
Sep 2006 – June 2010	**BSc in Economics**, Lomonosov Moscow State University (cum laude)

Research

Publications

- **The maximum k-colorable subgraph problem and related problems**, with R. Sotirov and J. C. Vera. Informs Journal on Computing, 34(1): 656–669, 2021.
- **New bounds for truthful scheduling on two unrelated selfish machines**, with J. C. Vera. Theory of Computing Systems, 64: 199–226, 2020.

- **Approximating the cone of copositive kernels to estimate the stability number of infinite graphs**, with J. C. Vera. Electronic Notes in Discrete Mathematics, 62: 303–308, 2017. Proceedings of LAGOS'17 – IX Latin and American Algorithms, Graphs and Optimization.

Working papers

- **Adjustable robust two-stage polynomial optimization with application to AC optimal power flow**, with B. Ghaddar and D. K. Molzahn, 2021. The paper is in the second round of revision.
- **Reducing non-negativity over general semialgebraic sets to non-negativity over simple sets**, with J. C. Vera and L.F. Zuluaga, 2019. The paper is in the first round of revision after a new submission.
- **Generalizations of Schoenberg's theorem on positive definite kernels**, with J. C. Vera, 2019. We are revising this paper before a new submission.
- **Positive semidefinite approximations to the cone of copositive kernels**, with J. C. Vera, 2018. We are revising this paper before a new submission.

I am also working on the following topics, for which no preprints are available yet

- Influence of battery and demand response agents on electricity market emmissions under varying market conditions
- Optimal bidding strategies for battery and demand response agents
- Sparse positive semidefinite relaxations for water networks problems
- Positive semidefinite hierarchies for the maximum measurable distance avoiding set problem

Teaching

2021 – present	Optimization under Uncertainty, Erasmus University Rotterdam level: master, role: coordinator and lecturer
2021 – present	Linear Programming, Erasmus University Rotterdam level: bachelor, role: coordinator and lecturer
2017 – 2019	Optimization, Tilburg University level: master, role: teaching assistant and lecturer
2016 – 2019	Decision making with Business Analytics, Tilburg University level: master, role: teaching assistant
2016 – 2018	Statistics, Tilburg University level: bachelor, role: teaching assistant

Conferences and workshops

2022	ICCOPT, International conference on continuous optimization (session organizer) Spring School in Theoretical Foundations of Electricity Market Design (participant)
2021	SIAM Conference on Optimization (OP21) (speaker) IISE Annual Conference & Expo Presentation (speaker)
2020	Data Fest Moscow 2020 (speaker) Workshop on Smart Cities Optimization (participant)
2019	ICCOPT, International conference on continuous optimization (speaker)
2018	ISMP, International congress of mathematical optimization (speaker, session organizer)
2017	Oberwolfach Workshop 1744b on Copositivity and Complete Positivity (speaker) LAGOS, IX Algorithms, Graphs and Optimization Symposium (speaker) IFORS, Conference of the international federation of operational research societies (speaker) EUROPT Workshop on Advances in Continuous Optimization (speaker)
2016	ICCOPT, International conference on continuous optimization (speaker)

Visits

May – June 2018	Lehigh University; host: Luis F. Zuluaga
April 2018	Delft University of Technology; host: Fernando M. de Oliveira Filho
March 2018	Trier University; host: Mirjam Dür

Other

- IT: Regular user of MS Office, LaTeX, Matlab, Python. Some experience with Github, Julia, Jupiter Notebook, R, SQL, Stata
- Languages: Russian – native, English – fluent, Dutch – advanced, German – basic
- Refereeing: Journal of Global Optimization, Journal of Optimization Theory and Applications, SN Operations Research Forum
- Operations Research Seminar organizer at Erasmus University Rotterdam, 2020 – present
- Conference session organizer: ISMP 2018, "Copositive and completely positive optimization", ICCOPT 2022, "Polynomial optimization"