Kerem Uğurlu

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EDUCATION:

Ph.D. in Applied Mathematics
University of Southern California, 2011-2016.
Thesis Advisor: Mohammed Ziane.

M.S. in Mathematics
Sabanci University, Turkey. 2009-2011.

M.S. in Computer Engineering
Sabanci University, Turkey. 2007-2009.

B.S. in Computer Science & Engineering
Minor in Mathematics.
Sabanci University, Turkey. 2000-2005.

High School
Sankt Georg Austrian High School, 1992-2000.

EMPLOYMENT:

Assistant Professor, Nazarbayev University, Kazakhstan (August, 2019 - Present)

Data Scientist/Optimization, Grab, Singapore (February, 2019 - August, 2019)

Research Associate, Computational Finance and Risk Management Programme, University of Washington, Seattle (September, 2016 - July, 2018)

Teaching Assistant, USC Mathematics Department (2011-2016). Conducted discussion sessions for variety of undergraduate classes on single and multi-variable Calculus, business statistics, ordinary differential equations and differential geometry including quiz and exam preparation and grading. Preparation of graduate students for their mandatory qualifying exam in real analysis by grading the homework and holding office hours and discussions for the graduate class Math 501. Sabanci University, Turkey (January, 2007 - August, 2011). Conducted discussion sessions for undergraduate probability and statistics courses including quiz and exam preparation and grading.

Software Developer, BNP Paribas, Turkey (August-2006, August-2007). Implementation of financial algorithms in treasury department

Consultancy, CyberSoft, Turkey (2009). Designed a Record Linkage Tool based on Machine Learning Algorithms to detect fraudulent credit requests and led the corresponding technical team. The tool is currently used in a major bank, Istanbul.

Research Interests: Stochastic Analysis and its Applications

PUBLICATIONS:

- "Portfolio Optimization with Drift Uncertainty", Submitted.

- "Optimal Control with Distorted Probability Distributions", accepted, to appear in Central European Journal of Operations Research.

- "Refinements of Kusuoka Representations on L^∞", Optimization, Volume 71, Issue 11, pp. 3351-3362, 2022.

- "A New Coherent Multivariate Average-Value-at-Risk", published online in Optimization https://doi.org/10.1080/02331934.2021.1970755

- "Robust Utility Maximization of Terminal Wealth with Drift and Volatility Uncertainty", published online in Optimization https://doi.org/10.1080/02331934.2020.1774586.

- "Optimal Control of MDPs with Unbounded Cost on Infinite Horizon", Journal of Computational and Applied Mathematics, Volume 344, 15 December 2018, Pages 275-287.

- "Optimal Contract Design in the Principal Agent Problem with Unknown Productivity", Turkish Journal of Mathematics 42, pp. 977-992, 2018.

- "Decomposability and Time Consistency of Risk Averse Multistage Programs", (with Alexander Shapiro) Operations Research Letters, vol. 44, pp. 663-665, 2016.

- "On the Galerkin Approximation and Strong Norm Bounds for the Stochastic Navier-Stokes Equations with Multiplicative Noise", (with Mohammed Ziane and Igor Kukavica), Differential and Integral Equations, Volume 31, Number 3/4 (2018), 173-186.

- "Continuity of Cost Functional and Optimal Feedback Controls for the Stochastic Navier Stokes Equation in 2D", Communications on Pure and Applied Analysis, vol. 16, pp. 189-207, 2017.

- "Controlled Markov Chains with AVaR-Criteria, for Unbounded Costs", Journal of Computational and Applied Mathematics, Volume 319, 2017, pp. 24-37.

AWARDS AND HONORS:

Research Grant Nazarbayev University, 2019-2022, (Amount: 100000$)

Research Grant Nazarbayev University, 2019-2020, (Amount: 10000$)

Research Assistantship University of Southern California, August 2014-May 2015.

Research Fellowship University of Southern California June 2014-August 2014.

Scholarship from Sabanci University for graduate study as a teaching/research assistant in the Computer Science Program, 2009-2011, including tuition, monthly stipend, accommodation, transportation and health expenses.

Scholarship from Sabanci University for graduate study as a teaching/research assistant in the Mathematics Program, 2007-2009, including tuition, monthly stipend, accommodation, transportation and health expenses.

Merit Scholarship from Sabanci University 2001.

SEMINARS & CONFERENCES:

AMaMeF 2021, Virtual, June 2021.

EUROPT 2021, Virtual, July 2021.

SIAM Conference on Financial Engineering, Virtual, June 2021.

32. National Symposium of Mathematics of Turkey, Samsun, September 2019.

Gebze Technical University, Mathematics Department, Istanbul, March 2019.

Istanbul University, Mathematics Department, Istanbul, February 2019.

University of Central Florida, Department of Mathematics, Orlando, FL, February 2018.

IYTE, Mathematics Department, Izmir, December 2017.

Ozyegin University, Applied Sciences Department, Istanbul, December 2017.

MEF University Industrial Engineering Seminar, Istanbul December 2017.

FINEWSTOCH Networkshop II, Oslo, November 2017.

METU IAM Seminar, Ankara, November 2017.

Mathematical Finance, Probability, and Partial Differential Equations Conference, Rutgers University, NJ, May 2017.

Bilkent University, Industrial Engineering Seminar, Ankara, October 2016.

SIAM Conference on Financial Math & Engineering, Austin TX, November 2016.

IPAM UCLA Mathematics of Turbulence, December 2014.

DEPARTMENTAL SERVICES:

Ph.D. Curriculum Committee Member, Nazarbayev University, 2019-.

Faculty Admission Committee Member, Nazarbayev University, 2019-.

Undergraduate Curriculum Committee Member, Nazarbayev University, 2019-.

M.Sc. Program Admission Committee Member, University of Washington, 2016-2018.

SUPERVISION and MENTORSHIP:

Ph.D Student Advisorship Gulnaz Shaidolda (2020-ongoing)

Master Student Advisorship Nurbek Saidnassim (2021- ongoing), Olzhas Shortanbaiuly (2022-ongoing), Yerlan Duisenbay, Nazarbayev University, (2019-2020).

UG Capstone Advisorship Ramazan Aitkaliyev, Nazarbayev University, 2019.

Industrial Ph.D. Student Mentorship Goh Yong Liang, Grab, Singapore, 2019, March - 2019, July.

AWARDS AND HONORS:

Research Grant Nazarbayev University, 2019-2022, (Amount: 100000$)

Research Grant Nazarbayev University, 2019-2020, (Amount: 10000$)

Research Assistantship University of Southern California, August 2014-May 2015.

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Scholarship from Sabanci University for graduate study as a teaching/research assistant in the Mathematics Program, 2007-2009, including tuition, monthly stipend, accommodation, transportation and health expenses.

Merit Scholarship from Sabanci University 2001.

REFERENCES

- Mohammed Ziane, Professor of Mathematics
  University of Southern California
  E-mail: ziane@usc.edu

- Jaksa Cvitanic, Richard N. Merkin Professor of Mathematical Finance
  Caltech
  E-mail: cvitanic@hss.caltech.edu

- Jianfeng Zhang, Professor of Mathematics
  University of Southern California
  E-mail: jianfenz@usc.edu

- Dongming Wei, Professor of Mathematics, Chair of Department of Mathematics, Nazarbayev University, Kazakhstan. (concerns teaching).
  E-mail: dongming.wei@nu.edu.kz