Arman Adibi

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Webpage

Research Interests

- Robust Optimization
- Saddle Point and Minimax Optimization
- Submodular Optimization
- Game Theory
- High-dimensional Statistics
- Reinforcement Learning
- Quickest Change Detection
- Distributed Learning

Appointments

Sep2023-Now **Postdoctoral Researcher**, *Department of ESE*, Princeton University.
- Advisor: Prof. H. V. Poor and Prof. S. Kulkarni

Sep2018-2023 **Research Assistant**, *Department of ESE*, University of Pennsylvania.
- Advisor: Dr. Hamed Hassani

Apr2016–Sep2018 **Research Assistant**, *Department of ECE*, Isfahan University of Technology.
- Advisor: Dr. Mohammad Mahdi Naghsh

Education

2018–2023 **Ph.D. Machine Learning and Optimization**
University of Pennsylvania,
Advisor: Prof. Hamed Hassani.
Thesis: Discrete and Continuous Optimization for Collaborative and Multi-task Learning

2013–2018 **B.Sc. Electrical Engineering**
(Communications System with a minor in mathematics)
Isfahan University of Technology.

2009–2013 **High school**, *National Organization for Development of Exceptional Talents (NODET)*, Ejehi High School.

Publication

-Conference Papers

- **" Min-Max Optimization under Delays "** Submitted to **American Control Conference (ACC), 2023** .

- **" Collaborative Linear Bandits with Adversarial Agents: Near-Optimal Regret Bounds " Advances in Neural Information Processing Systems(NeurIPS), 2022** .

- **" Distributed Statistical Min-Max Learning in the Presence of Byzantine Agents " IEEE Conference on Decision and Control (CDC), 2022** .

- **" Minimax Optimization: The Case of Convex-Submodular" International Conference on Artificial Intelligence and Statistics (AISTATS), 2022** .
Spotlight in "Subset Selection in Machine Learning" Workshop, ICML 2021.
***Oral presentation** in AISTATS 2022 (top 2% of submitted papers).*

- **" Optimal Algorithms for Submodular Maximization with Distributed Constraints" Learning for Dynamics and Control (L4DC),2021** .

- **" Submodular Meta-Learning " Advances in Neural Information Processing Systems(NeurIPS), 2020** .

-Journal Papers

- **" Max-Min Fairness Design in MIMO Interference Channels: A Minorization-Maximization Approach" IEEE Transactions on Signal Processing (TSP), 2019** .

Honors &Awards

2018 **Lilian Beck Fellowship** , University of Pennsylvania.

2018 **The Dean's Fellowship**, University of Pennsylvania.

2017 **Third Prize**, International Mathematics Competition **(IMC)** for University Students.
Bulgaria

Professional Service

-Reviewer for:

- International Conference on Machine Learning(ICML)
- International Conference on Learning Representations (ICLR)
- Conference on Neural Information Processing Systems(NeurIPS)
- International Conference on Artificial Intelligence and Statistics(AISTATS)
- IEEE International Symposium on Information Theory(ISIT)
- IEEE Transactions on Automatic Control Journal(TAC)
- IEEE Conference on Decision and Control(CDC)
- Learning for Dynamics and Control (L4DC)
- IEEE American Control Conference(ACC)

Teaching and Assistantships

Teaching Assistant, *Linear System Theory*,
ECE Department at Upenn(Ph.D. Qualifier Course).
- Dr. George J. Pappas

Teaching Assistant, *Probability Theory*,
ECE Department at Upenn(Ph.D. Qualifier Course).
- Dr. Santosh S. Venkatesh

Teaching Assistant, *Applied Linear Algebra*,
Math Department at Isfahan University of Technology.
- Dr. Javadi

Teaching Assistant, *Signals and systems*,
ECE Department at Isfahan University of Technology.
- Dr. Khosravifard

Teaching Assistant, *Fundamentals of Mathematical Analysis*,
Math Department at Isfahan University of Technology.
- Dr. Gazor

Teaching Assistant, *Foundations Of Mathematics*,
Math Department at Isfahan University of Technology.
- Dr. Bahrami

Courses

-University of Pennsylvania

Graduate Courses

- Mathematics of High-Dimensional Data, Functional Analysis, Randomized Algorithms, Deep Learning, Statistics for Data Science, Probability Theory, Linear System Theory, Mathematical Statistics, Optimization in Machine Learning, Advanced Statistical Inference, Information Theory(Audit), Modern Convex Optimization(Audit), Microeconomic Theory II(Audit)

-Isfahan University of Technology

Relevant Graduate Courses

- Advanced Topology, Real Analysis, Optimization, Spectral Estimation, Digital Signal Processing

Relevant Undergraduate Courses

- Advanced Probability, Graph theory, Combinatorics, Discrete Dynamical System, Advanced Linear Algebra, Mathematical Analysis, Abstract Algebra 1, Fundamental Mathematical Analysis, Linear Algebra, Digital Communication, Signals & Systems, Engineering Economics and Industrial Management , Field & Waves, Wireless Communication , Numerical Analysis, ODE

Computer skills

Programming: C++/C, python, TensorFlow, Pytorch, Matlab, Verilog
Typesetting: LaTeX, Microsoft Office

References

Prof. Hamed Hassani, *Department of ESE*, University of Pennsylvania.
E-mail : hassani@seas.upenn.edu

Prof. Aritra Mitra, *Department of ECE*, North Carolina State University.
E-mail : amitra20@seas.upenn.edu

Prof. Aryan Mokhtari, *Department of ECE*, University of Texas at Austin.
E-mail : mokhtari@austin.utexas.edu

Prof. George J. Pappas , *Department of ESE*, University of Pennsylvania.
E-mail : pappasg@seas.upenn.edu

Prof. H. Vincent Poor , *Department of ECE*, Princeton University.
E-mail : poor@princeton.edu

Prof. Sanjeev Kulkarni , *Department of ECE*, Princeton University.
E-mail : kulkarni@princeton.edu