Parnian Kassraie

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EMPLOYMENT

Google DeepMind, Research Scientist
Member of Foundational Research.
Sep 2025 -

Google DeepMind, Student Researcher
At the Gemma post-training team, hosted by Olivier Bachem.
Sep - Dec 2024

Apple MLR, Research Intern
At the optimization team, hosted by Prof. Marco Cuturi.
Mar - Aug 2024

ETH Zurich, Research Assistant
At the Learning and Adaptive Systems Group with Prof. Andreas Krause.
Spring 2020

Technical University of Munich, Research Intern
At the Chair for Computer Aided Medical Procedures with Prof. Nassir Navab.
Summers 2017 & 2018

EDUCATION

ETH Zurich
Ph.D. in Computer Science
Thesis: Learning to Optimize in Structured Environments
Advisers: Prof. Andreas Krause and Prof. Peter Bühlmann
Committee: Prof. Kevin Jamieson and Prof. Aldo Pacchiano
2021 - 2025

Carnegie Mellon University
Visiting Scholar at the Department of Statistics and Data Science
Host: Prof. Aaditya Ramdas
Jan - May 2025

ETH Zurich
M.Sc. in Computer Science
Thesis: Contextual Bandit Optimization with the Neural Tangent Kernel
2019 - 2021

Sharif University of Technology, Tehran, Iran
B.Sc. in Electrical Engineering
B.Sc. in Computer Science
2014 - 2019

AWARDS

Recipient, Google PhD Fellowship in Machine Intelligence (80,000 CHF anum, article)
2024

Winner, G-research PhD Prize in Mathematics (5,000 CHF, press)
2024

Recipient, ETH Zurich Doc.Mobility Fellowship (8,700 CHF)
2024

Winner, NeurIPS Scholar Award (∼2,000 CHF)
2023, 2024

Recipient, ETH Zurich Direct Doctorate Scholarship (22,000 CHF)
2019

Winner, CAMP@TU Munich International Undergraduate Excellence Award (4,500 EUR)
2018

Gold Medalist, 26th Iranian National Physics Olympiad
2013

PUBLICATIONS

A list of publications is also available on my Google Scholar profile.

2025   LITE: Efficiently Estimating Gaussian Probability of Maximality   AISTATS
Menet N., Hübotter J., **Kassraie P.**, Krause A.

2024   Progressive Entropic Optimal Transport Solvers [pdf]   NeurIPS
Kassraie, P., Pooladian A., Klein M., Thornton J., Niles-Weed J., Cuturi M.

Bandits with Preference Feedback: A Stackelberg Game Perspective [pdf]   NeurIPS
Pásztor* B., **Kassraie*, P.**, Krause, A.

2023   Instance-Dependent Generalization Bounds via Optimal Transport [pdf]   JMLR
Hou*, S., **Kassraie*, P.**, Kratsios* A. , Rothfuss* J. and Krause, A.

Anytime Model Selection in Linear Bandits [pdf]   NeurIPS
Kassraie, P., Emmenegger N., Krause, A. and Pacchiano A.
Oral at PAC-Bayes Meets Interactive Learning Workshop

Lifelong Bandit Optimization: No Prior and No Regret [pdf]   UAI
Schur*, F., **Kassraie*, P.**, Rothfuss J. and Krause, A.

Hallucinated Adversarial Control for Conservative Offline Policy Evaluation [pdf]   UAI
Rothfuss* J., Sukhija* B., Birchler* T., **Kassraie, P.** and Krause, A.

2022   Graph Neural Network Bandits [pdf]   NeurIPS
Kassraie, P., Krause, A., Bogunovic, I.

Meta-Learning Hypothesis Spaces for Sequential Decision-making [pdf]   ICML
Kassraie, P., Rothfuss J. and Krause, A.

Neural Contextual Bandits without Regret [pdf]   AISTATS
Kassraie, P., and Krause, A.

2017   Election Vote Share Prediction using Twitter Sentiment Data [pdf]   long oral DATA
Kassraie*, P., Modirshanechi*, A. and Aghajan, H.

PREPRINTS

2023   Model-Based Optimization over Large and unbounded Molecular Spaces [pdf]   preprint
Wang-Henderson M., Soyuer B., **Kassraie, P.**, Krause, A., Bogunovic, I.
Presented at workshops SPIGM @ ICML, and AI4D3 @ NeurIPS.

TALKS AND POSTER PRESENTATIONS

For some presentations the links to [**p**]oster, [**s**]lides, or [**v**]ideo are included.

Bandits with Preference Feedback: A Game Theoretic Perspective
2025   Overparametrization, Identifiability and Uncertainty in ML, Oberwolfach   invited talk
2024   NeurIPS, Vancouver [**p**]   poster
TTIC summer workshop on Adaptive Learning, Chicago [**p**]   poster

Anytime Model Selection in Bandits

2024	Game-theoretic Statistics Workshop, Oberwolfach [s]	invited talk
	ELLIS Workshop on Interactive Learning, Oberwolfach [s]	invited talk
	Conference in Mathematical Aspect of Learning Theory, CRM Barcelona	poster
2023	Institute of Mathematical Statistics ICSDS, Lisbon [s]	contributed talk
	PAC-Bayes Meets Interactive Learning Workshop, Hawaii [s]	oral
	Royal Statistical Society (RSS) Conference, Harrogate [s]	contributed talk
	NeurIPS, New Orleans [p, v]	poster

Meta-Learning for Sequential Decision-making

2022	ICML, Baltimore [p, s]	spotlight
	Simons Institute's Workshop on Quantifying Uncertainty, UC Berkeley [p]	poster
	Workshop on Anytime-Valid Inference (SAVI), Eindhoven [p, s]	contributer talk
	ETH Zurich PhD Lunch Seminar [s]	contributed talk

Graph Neural Network Bandits

2023	Workshop on Structured Probabilistic Inference, Hawaii	poster
2022	NeurIPS, New Orleans [p, s, v]	poster

Neural Contextual Bandits without Regret

2022	International Conference on Artificial Intelligence and Statistics, virtual [p, s, v]	poster
2021	Master's Thesis Presentation, ETH Zurich [s]	defense

2019	**Understanding Adversarial Attacks by Network Visualization**	
	Bachelor's Thesis Presentation, TU Munich [s]	defense

2017	**Election Vote Share Prediction using Twitter Sentiment Data**	
	International Conference on Data Science Technologies, Madrid [s]	long oral

TEACHING

Research Supervision

2024	Nicolas Menet. **Estimating Probability of Maximality** (co-supervised)	now PhD at IBM & ETH
2023	Nicolas Emmenegger. **Online Model Selection** (student collaborator)	now PhD at MIT
	Miles Wang-Henderson. **GNN Bandits for de Novo Molecular Design**	now at Terray
	Mikhail Terekhov. **Bandit Optimization with Pre-trained Models**	now PhD at EPFL
2022	Adrian Müller. **Meta-Learning Hypotheses with Infinite Kernels**	now PhD at ETH
	Felix Schur. **Lifelong Bandit Optimization** (co-supervised, ETH Medal)	now PhD at ETH
2021	Kruno Lehman. **Function-space VI for BNNs** (co-supervised)	now PhD at Meta & ENS
	Deepak Narayanan. **Bandits for molecular optimization** (co-supervised)	now PhD at ETH

Teaching Assistantship

2025 (S)	Projects in Machine Learning Research (project supervision)	ETH Zurich
2025 (S)	Introduction to Machine Learning (exam design)	
2024 (F)	Probabilistic Artificial Intelligence (head of exam design)	
2023 (F)	Probabilistic Artificial Intelligence (head TA, course with over 800 students)	
2023 (S)	Introduction to Machine Learning (exam design)	

2022 (F)	Probabilistic Artificial Intelligence (tutorials)	
2022 (S)	Introduction to Machine Learning (head of exam design)	
2021 (F)	Probabilistic Artificial Intelligence (exam design)	
2021 (S)	Guarantees in Machine Learning (tutorials, homeworks, projects)	
2018 (F)	Data Analysis (tutorials)	Sharif University
2017 (S)	Signals and Systems (tutorials, exam design)	
2017 (F)	Mathematics of Engineering (tutorials, exam design)	
2016 (F)	Mathematics of Engineering (tutorials, exam design)	

SERVICES & OUTREACH

Organization

2025   Two-day workshop: Two Faces of Optimization workshop at ETH Zurich.

2025   One-day workshop: Exploration in AI Today (EXAIT) workshop at ICML.

2022   Invited Session: Conformal Prediction Beyond Exchangeability at ETH FDS seminar.

Reviewing

Journal of Machine Learning Research, Conference on Neural Information Processing Systems (2022 - 2025), International Conference on Machine Learning (2022 outstanding reviewer, 2023), International Conference on Artificial Intelligence and Statistics (2022 top reviewer, 2023 top reviewer, 2025), International Conference on Learning Representations (2024, 2025)

Mentorship

2023   Mentoring at ETH CSNoW; Mentorship program for junior female graduate students.

2022   Mentoring at Women in ML; Mentorship program for prospective graduate students.