# SAEED GHOORCHIAN

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## EDUCATION

**Ph.D. in Computer Science (Machine Learning)**, University of Tübingen, Germany.
2018 - Present

Thesis: Online Learning under Partial Feedback
Adviser: Prof. Setareh Maghsudi

**M.Sc. in Applied Mathematics**, Joint Erasmus Mundus Master Program,
University of Hamburg (primary), Germany, and University of L'Aquila (secondary), Italy.
2015 - 2017

Thesis: Kernelized Principal Component Analysis of Linear Parameter Varying models
Adviser: Prof. Herbert Werner

**B.Sc. in Pure Mathematics**, Iran University of Science and Technology, Iran.
2009 - 2014

## PUBLICATIONS

[1] **Saeed Ghoorchian** and Setareh Maghsudi. "Multi-Armed Bandit for Energy-Efficient and Delay-Sensitive Edge Computing in Dynamic Networks with Uncertainty". *IEEE Transactions on Cognitive Communications and Networking (TCCN)*, 2020.

[2] Onur Atan, **Saeed Ghoorchian**, Setareh Maghsudi, and Mihaela van der Schaar. "Data-Driven Online Recommender Systems with Costly Information Acquisition". *IEEE Transactions on Services Computing (TSC)*, 2021.

[3] **Saeed Ghoorchian***, Behzad Nourani-Koliji*, and Setareh Maghsudi. "Linear Combinatorial Semi-Bandit with Causally Related Rewards". *International Joint Conference on Artificial Intelligence (IJCAI)*, 2022.

[4] **Saeed Ghoorchian** and Setareh Maghsudi. "Bayesian Linear Bandits for Large-Scale Recommender Systems". *Under review*, 2022.
saeedghoorchian/BCMAB-RP

[5] **Saeed Ghoorchian**, Evgenii Kortukov, and Setareh Maghsudi. "Online Learning with Costly Features in Non-stationary Environments". *Under review*, 2023.
saeedghoorchian/NCC-Bandits

[6] **Saeed Ghoorchian** and Setareh Maghsudi. "Non-stationary Delayed Combinatorial Semi-Bandit with Causally Related Rewards". *Under review*, 2023.

## WORK EXPERIENCES

**Senior Researcher**, University of Tübingen, Germany.
June 2022 - Present

Designing algorithms to address reinforcement learning problems with perturbed rewards and inverse reinforcement learning problems with perturbed state observation.

**Consultant on Algorithm Development**, Datalyze Solutions GmbH, Germany.

May 2022 - August 2022 · Freelance

Consulted on formulating optimization problems and designing an algorithm for real-time task planning in changing environments.

**Research Assistant**, Technical University of Berlin, Germany.
May 2018 - May 2022

Developed frameworks and algorithms to model and solve online learning problems with partial feedback in dynamic environments with various characteristics, such as causal relations, costly features, and high-dimensional features.

**Guest Researcher**, Hamburg University of Technology, Germany.
November 2017 - March 2018

Applied kernelized principal component analysis, support vector machines, and $\epsilon$-support vector regression for modeling systems of high complexity.

saeedghoorchian/An-epsilon-SVR-Approach-for-Model-Identification

saeedghoorchian/Dimensionality-Reduction-Using-KPCA

## ACADEMIC EXPERIENCES AND APPEARANCES

**Teaching Assistant**, University of Tübingen, Germany.
October 2022 - Present
October 2021 - March 2022

Course: Introduction to Game Theory with Application in Multi-Agent Systems.

**Supervision**, Technical University of Berlin and University of Tübingen, Germany.
May 2021 - May 2022

Helped junior researchers to design and implement decision-making algorithms.

**Reviewer:** IEEE ISIT 2022 – AISTATS 2021 – IEEE TCNC.

**Talks and Presentations:**

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|---|---|
| **September 2022** | University of Tübingen |
| **July 2022** | IJCAI 2022 |
| **November 2021** | University of Tübingen |
| **June 2021** | University of Tübingen |
| **April 2021** | University of Tübingen |

## SKILLS

- Python (Pytorch, Keras, TensorFlow, Pandas, NumPy, sklearn), Matlab, Simulink, C++, R, SQL.
- AWS, Slurm, Docker, Container.
- Multi-armed bandits, reinforcement learning, imitation learning, deep neural networks.
- Statistical ML, Bayesian methods, optimization, uncertainty analysis, causal inference.
- Supervision, research, academic writing, presentation.
- English (C1), Persian (Native), German (B1), Italian (A1).

## AWARDS

**August 2015** Full scholarship from the Erasmus Mundus program (from EU).