

# ABDULLAH TOKMAK

DOCTORAL RESEARCHER AT AALTO UNIVERSITY



## PERSONAL INFORMATION

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**Citizenship:** German

**Date and place of birth:** 08.03.1998 in Düren, Germany

**Address:** Huvilinnänmäki 8A, 02600 Espoo, Finland

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## PUBLICATIONS

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### Journal articles

[AT1] **A. Tokmak**, C. Fiedler, M. Zelinger, S. Trimpe, J. Köhler, “Automatic nonlinear MPC approximation with closed-loop guarantees,” *IEEE Transactions on Automatic Control* (JUFO 3), 2025.

### Conference proceedings

[AT2] **A. Tokmak**, T. Schön, D. Baumann, “Towards safe control parameter tuning in distributed multi-agent systems,” *Conference on Decision and Control* (JUFO 1), 2025.

[AT3] **A. Tokmak**, T. Schön, D. Baumann, “Safe exploration in reproducing kernel Hilbert spaces,” *International Conference on Artificial Intelligence and Statistics* (JUFO 2), 2025.

[AT4] **A. Tokmak**, T. Schön, D. Baumann, “PACSBO: Probably approximately correct safe Bayesian optimization,” *Symposium on Systems Theory in Data and Optimization* (JUFO 0), 2024.

### Preprints

[AT5] **A. Tokmak**, T. Schön, D. Baumann, “Safe Bayesian optimization across noise models: A practical and unified framework,” under review for *IEEE Control System Letters* (JUFO 1), 2025.

## EXPERIENCE

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### Doctoral researcher at Aalto University

Department of Electrical Engineering and Automation, Cyber-Physical Systems Group

03/2023 - today

*Espoo, Finland*

- Ph.D. project: Safe and resource-aware multi-agent learning with Gaussian processes
- Supervisors: Prof. Dr. Dominik Baumann (Aalto University) and Prof. Dr. Thomas Schön (Uppsala University)

### Student assistant at Research Center Jülich

Deterministic global optimization for energy systems and climate research

12/2020 - 08/2021

*Jülich, Germany*

### Intern at MBDA Deutschland GmbH

Optimization of flight control algorithms

10/2019 - 03/2020

*Schrobenhausen, Germany*

### Student assistant at RWTH Aachen University

Classification of molecules for combustion technology

04/2019 - 07/2019

*Aachen, Germany*

## EDUCATION

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### ETH Zurich

Exchange student in Mechanical Engineering (best possible project grade)

04/2022 - 11/2022

*Zurich, Switzerland*

### RWTH Aachen University

Master of Science in General Mechanical Engineering (graduated with distinction)

10/2020 - 11/2022

*Aachen, Germany*

### RWTH Aachen University

Bachelor of Science in Mechanical Engineering (grade=1.8; grade scale 1.0 *best* — 5.0 *fail*)

10/2016 - 09/2020

*Aachen, Germany*

## TEACHING

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<b>Digital and optimal control</b> Teaching assistant	09/2023 - today <i>Espoo, Finland</i>
<ul style="list-style-type: none"><li>• Responsible for creating and teaching weekly exercise sessions; creating and grading exams</li><li>• Responsible for the lecture “Linear model predictive control and convex optimization” and “Discretization”</li></ul>	
<b>Foundations of machine learning</b> Student teaching assistant	09/2021 - 03/2022 <i>Aachen, Germany</i>
<b>Mechanics</b> Student teaching assistant	09/2017 - 03/2019 <i>Aachen, Germany</i>

## PRESENTATIONS

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### Seminars

Invited speaker at the SIAM Conference on Uncertainty Quantification	03/2026
Applied Mathematics Research Unit at Lappeenranta–Lahti University of Technology	03/2025
Division of Systems and Control at Uppsala University	10/2024

### Invited talks

Spotlight talk at Symposium on Systems Theory in Data and Optimization	09/2024
Finnish AI Day 2024	11/2024

### Posters

Finnish AI Day	2023, 2024, 2025
IEEE Finnish Control Workshop	09/2025
European Workshop on Reinforcement Learning	09/2025
Aligning Reinforcement Learning Experimentalists and Theorists Workshop	07/2024

## SUPERVISION

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Throughout my Ph.D., I have supervised two **master theses**, three **bachelor theses**, one **summer internship**, and one **project work** for international students and students from Aalto University.

## REVIEW SERVICES

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IEEE Control System Letters	03/2025 - today
IEEE Conference on Decision and Control	03/2025 - today
Learning for Dynamics and Control	03/2024 - today
European Workshop on Reinforcement Learning	07/2025
Symposium on Systems Theory in Data and Optimization	07/2024
Aligning Reinforcement Learning Experimentalists and Theorists Workshop	05/2024

## HONORS

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<b>Friedrich-Wilhelm Award:</b> Award from RWTH Aachen University for my master’s thesis	10/2023
<ul style="list-style-type: none"><li>• Among the top 18 master’s and doctoral theses of class 2022 at RWTH Aachen University</li><li>• <a href="https://www.dsme.rwth-aachen.de/cms/dsme/das-institut/aktuelle-meldungen/~bergpy/abdullah-tokmak-receives-friedrich-wilhe/">https://www.dsme.rwth-aachen.de/cms/dsme/das-institut/aktuelle-meldungen/~bergpy/abdullah-tokmak-receives-friedrich-wilhe/</a></li></ul>	
<b>Springorium Commemorative Coin:</b> Graduating from RWTH Aachen University with distinction	10/2023
<b>Scholarship:</b> IDEA League funding for my research stay at ETH Zurich	04/2023 - 11/2022
<b>Scholarship:</b> German National Academic Foundation	04/2018 - 11/2022
<b>Dean’s List:</b> Among the top 5% of students	2016/2019, 2020/2021