Erdi Sayar

✉ erdi.sayar@tum.de | 🔗 LinkedIn | ⌂ GitHub | ⊕ Portfolio | ⚲ Munich, Germany

EDUCATION

Technical University of Munich — Munich, Germany
Ph.D Computer Science; — *2020 – present*

RWTH Aachen University — Aachen, Germany
M.Sc. Electrical Engineering, Information Technology and Computer Engineering; **GPA: 1.5/1.00** — *2018 – 2020*
Thesis : Anomaly detection in unknown environments using sensory agents
Advisors :Prof.Dr.Ascheid Gerd Grade: 1.0

Bochum University of Applied Sciences — Bochum, Germany
B.Sc. Mechatronics Engineering; **GPA: 1.36/1.00** — *2013 – 2014*

Kocaeli University — Kocaeli, Türkiye
B.Sc. Mechatronics Engineering; **GPA: 3.82/4.00** — *2010 – 2015*
Valedictorian, ranked first in the faculty of engineering. Graduated with top honors.

EXPERIENCE

Research Asistant
Technical University of Munich — *10/2020 – present   Munich, Germany*
Teaching
- *Kognitive Systeme (IN2222) S24,S23*

Student Asistant
RWTH Aachen University — *10/2018 – 04/2019   Aachen, Germany*

Research Asistant
Izmir Institute of Technology — *02/2017 – 02/2018   Izmir, Türkiye*
Teaching
- *ME352 SYSTEM ANALYSIS AND CONTROL*
- *ME242 APPLIED MATHEMATICS FOR ENGINEERS*

Research Asistant
Turkish-German University — *02/2016 – 02/2017   Istanbul, Türkiye*

JOURNAL PUBLICATIONS

1. **E Sayar**, X Gao, Y Hu, G Chen, A Knoll. *Toward coordinated planning and hierarchical optimization control for highly redundant mobile manipulator* ISA Transactions, 2024.

2. **E Sayar**, G.Iacca, A Knoll. *Curriculum learning for robot manipulation tasks with sparse reward through environment shifts*, IEEE Open 2024.

CONFERENCE PUBLICATIONS

3. **E Sayar**, G.Iacca, O Oguz, A Knoll. *Diffusion-based Curriculum Reinforcement Learning*, Neural Information Processing Systems (NeurIPS 2024)

4. **E Sayar**, G.Iacca, A Knoll. *Multi-Objective Evolutionary Hindsight Experience Replay*, The Genetic and Evolutionary Computation Conference (GECCO), Melbourne, Australia, July 2024.

5. **E Sayar**, Z.Bing, C D'Eramo, O Oguz, A Knoll. *Contact Energy Based Hindsight Experience Prioritization* IEEE International Conference on Robotics and Automation (ICRA), Yokohama, Japan, May 2024.

6. **E Sayar**, V.Vintaykin, G.Iacca, A Knoll. *Hindsight Experience Replay with Evolutionary Decision Trees for Curriculum Goal Generation*, European Conference on Genetic Programming (EuroGP), Wales, United Kingdom, April 2024.

7. C Sariman, A Hallawa, **E Sayar**, A Peine, L Martin, A Schmeink *Exploration of unknown environments via evolution of behavioral and morphological properties of miniaturized sensory agents* The Genetic and Evolutionary Computation Conference (GECCO), Bostan, USA, July 2022.

8. **E Sayar**, *Assistive Handwriting Haptic Mechanism Using Deep Learning Speech Recognition*, European Conference on Mechanism Science (EuCoMeS), Cluj-Napoca, Romania, 2020

9. **E Sayar**, M Ertunc. *Fuzzy logic controller and PID controller design for aircraft pitch control*, European Conference on Mechanism Science (EuCoMeS), Aachen, Germany, September, 2018

Mentoring

- **M.Sc. Students** Md Siyam Sajeeb Khan, Xiyuan Wang, Efe Kaya, Faruk Oruc

- **Undergraduate Students** Vladislav Vintaykin, Khalil Chikhaoui, Emre Öztas, Mohamed Bouhali, John F. Stewardson

Skills

Languages: C/C++, Python, C#, MATLAB & Simulink, Maple, Linux, HTML, CSS, Javascript, LaTeX
Technologies: Git, Docker, PyTorch, TensorFlow, ROS, Unity, MuJoCo, gRPC, Ansys, Solidworks, Blender
Languages: Turkish(Native), English(C1), German(B2)

Additional Activities & Achievements

- Certified A1/A3 Open Category Drone Pilot (EU Regulation)

- DLR & TU Braunschweig ASDA Spring School on Innovative Drone Applications in 2025

- Ranked 1st in the Faculty of Engineering, Kocaeli University (over 1000 students)

- ROS Summer School Certificate at FH Aachen

- Voluntary Work for Assisting Elderly People with Shopping in Garching/Munich