



Fabian Jakob

Personal Information

-  02.01.1998
-  Rotebühlstraße 149
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IT - Knowledge

Languages/Softwares:
Matlab, Python, C++

Tools:
Git, Docker, LaTeX

Libraries:
libfranka (C++), PyTorch (Python),
Robust Control Toolbox (Matlab),
CVX (Matlab), CasADi

Languages

| | |
|---------|---------------|
| German | Mother Tongue |
| English | C1 |
| Russian | B1 |
| Italian | A2 |

Interests



Working Experience

Since Feb 24

Institute for Systems Theory and Automatic Control, University of Stuttgart

Research Associate

- Research on algorithm synthesis for online optimization
- Organization and assistance in various teaching activities
- Coordinator for international student exchange

Jan 23
Jan 24

Munich Institute of Robotics and Machine Intelligence, Technical University of Munich

Research Associate

- Research on high-frequency robot cloud controllers
- Development of the control software architecture for a 5G-based mobile robotic surgical platform

Mar 22
Oct 21

Robert Bosch GmbH

Industrial Internship

- Development and implementation of a control algorithm for noise reduction of electric heat pumps

Sep 21
Apr 18

University of Stuttgart, Institutes: IST, ISYS, ITM

Student Employee

- Participation in multiple research projects, e.g. implementing data-driven Model Predictive Control schemes on a 3-DoF helicopter among other things
- Assistance in various teaching activities



Education

Dec 22
Apr 20

University of Stuttgart

M.Sc. Engineering Cybernetics

- Specializations: Control, Learning and Optimization
- Thesis: "Machine Learning Enhanced Automated Quantum Dot Detection"
- Erasmus stay at the University of Padova in Italy
- Final grade: 1,1

Mar 20
Sep 16

Universität Stuttgart

B.Sc. Engineering Cybernetics

- Specialization: Cognitive Robotics
- Thesis: „Nonlinear Experimental Modal Analysis with Multiharmonic Excitation"
- Final grade: 1,2

Jun 16
Sep 08

Droste-Hülshoff-Gymnasium Rottweil

Abitur (High School)

- Final grade: 1,5



Awards

Dec 22

Best graduate of the year in the M.Sc. Engineering Cybernetics degree of the University of Stuttgart

Dec 22
Feb 20

Deutschland Stipendium scholarship in the years 2020, 2021 und 2022



Volunteering

Since Feb 23

Jury member in the provincial school competition *Jugend Forscht*

Apr 22
Apr 20

Mentor for international students at the University of Stuttgart



Publications

2024

Fabian Jakob, Xiao Chen, Hamid Sadeghian, and Sami Haddadin. Enhancing the tracking performance of passivity-based high-frequency robot cloud control. In *2024 IEEE International Conference on Robotics and Automation (ICRA)*, 2024.

2023

Emilio Corcione, Fabian Jakob, Lukas Wagner, Raphael Joos, Andre Bisquerra, Marcel Schmidt, Andreas D. Wieck, Arne Ludwig, Michael Jetter, Simone L. Portalupi, Peter Michler, and Cristina Tarín. Machine learning enhanced evaluation of semiconductor quantum dots. In *nature scientific reports* 14, 2024
Citations: 4