

JENS ERNSTBERGER

+49 170-781-7661 ◊ Munich, Germany ◊ jens.ernstberger@tum.de

ACADEMIC INTEREST

My main research interest lies in security for decentralized systems, with a recent focus on DeFi security and Data Sovereignty. Beyond that, I am interested in the role of decentralized systems in resource constrained environments. I am most excited about problems that require novel theoretical insights and also have real-world applications.

EDUCATION

- | | |
|---|-------------------|
| Technical University of Munich
<i>Research Assistant and PhD Candidate</i> <ul style="list-style-type: none">• Professorship for Embedded Systems and IoT• Advisor(s): Sebastian Steinhorst, Arthur Gervais | 07/2021 – |
| Technical University of Munich
<i>Master of Science, Electrical Engineering and Information Technology</i> <ul style="list-style-type: none">• Advisor: Sebastian Steinhorst• Master Thesis: Zero Knowledge Proof of Authorization for DLT-based Identity Management | 09/2018 – 03/2021 |
| Technical University of Munich
<i>Bachelor of Science, Electrical Engineering and Information Technology</i> <ul style="list-style-type: none">• Bachelor Thesis: Teleoperated Control of a Humanoid Robot | 08/2015 – 09/2018 |
| Wilhems-Gymnasium, Stuttgart
<i>High School Diploma</i> | 09/2007 – 06/2015 |

PROFESSIONAL EXPERIENCE

- | | |
|---|-------------------|
| University of California, Berkeley
<i>Visiting Researcher – Center for Responsible, Decentralized Intelligence</i> <ul style="list-style-type: none">• Research Fields: Decentralized Identity, Decentralized Access Control, Decentralized Computation• Collaboration with Imperial College London and Texas AM University | 07/2022 – 09/2022 |
| FAS AG
<i>Working Student – Digital Architects</i> <ul style="list-style-type: none">• Support of the Managing Partner through preparation of meetings and project proposals• Development of Business Intelligence solutions and platform-based data analytics applications | 10/2020 – 12/2020 |
| KPMG AG
<i>Working Student – Automotive Institute</i> <ul style="list-style-type: none">• Identification of trends in the automotive industry through extensive data analysis• Content development & conception of a study on the future of the automotive sector• Led the Business Intelligence for the study by building more than 50 BI dashboards | 06/2019 – 05/2020 |
| Tsinghua – Daimler Joint Research Center
<i>Research Associate – Digital Hub</i> <ul style="list-style-type: none">• Research on new in-car applications through behavior prediction and customer interaction• Created a location prediction application for automated destination prediction in China | 12/2018 – 05/2019 |
| Mercedes-Benz R&D North America
<i>Intern – IoT & Wearables</i> <ul style="list-style-type: none">• Programmed a skill for Amazon Alexa using the Amazon Alexa skills kit & Node.JS• Implemented new and expanded already existing functions to interact with the vehicle | 08/2017 – 11/2017 |
| Daimler AG
<i>Intern – Digital Vehicle & Mobility</i> | 03/2017 – 05/2017 |

- Market analysis of existing digital assistants
- Preparation of presentations for the Top-Management

PUBLICATIONS

- 2022** 'SoK: Decentralized Finance (DeFi) Incidents'
 Liyi Zhou, Xihan Xiong, **Jens Ernstberger**, Stefanos Chaliasos, Zhipeng Wang, Ye Wang,
 Kaihua Qin, Roger Wattenhofer, Dawn Song, Arthur Gervais
Science of Blockchain Conference (Stanford, August 2022)
- 2021** 'A-PoA - Anonymous Proof of Authorization for Decentralized Identity Management'
 Jan Lauinger, **Jens Ernstberger**, Emanuel Regnath, Mohammad Hamad, Sebastian Steinhorst
IEEE International Conference on Blockchain and Cryptocurrency (ICBC, May 2021)

TALKS

- 2022** **SoK: Decentralized Finance (DeFi) Attacks**
UC Berkeley Center for Responsible Decentralized Intelligence (RDI Lunch Seminar, September 2022)
- An Empirical Study of DeFi Liquidations: Incentives, Risks, and Instabilities**
The Science of Blockchain Conference, Stanford (August 2022)
- Data Sovereignty and Decentralized Data Science**
UC Berkeley Haas Institute for Business Innovation (IBI Brown Bag Seminar, July 2022)

SKILLS

Languages	German, English, French, Chinese
Programming	Advanced in Python, Sufficient in Matlab, Javascript, Go
Tools	Git, Docker, Tableau, Powerpoint

TEACHING EXPERIENCE

Teaching Assistant	Software Architecture for Distributed Embedded Systems Technical University of Munich, Fall 2021
	Advanced Seminar Embedded Systems IoT Fall 2021, 2022; Summer 2022

SERVICES

External Reviewer	2021: FC, AFT
	2022: CESC, S&P (Oakland), NDSS, Usenix Security, CCS, AFT, ConsensusDay22
	2023: S&P (Oakland), NDSS