

TOBIAS PFANDZELTER

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Fourth-year Computer Science PhD candidate in the field of distributed and scalable software systems. Current research interests include edge and fog computing, particularly in the context of novel LEO satellite communication systems.

Education

Technische Universität Berlin

Computer Science, Doctoral Degree

Sep. 2019 – present

Berlin, Germany

Center for Cultural Studies on Science and Technology in China (CCST)

China Master Label

Mar. 2020

Berlin, Germany

Tongji University Shanghai

“Smart Shanghai” Summer School

Sep. 2019

Shanghai, China

Technische Universität Berlin

Master of Science in Computer Science

Distributed Systems and Networks Focus

Grade 1.0 (equiv. 4.0 GPA)

Oct. 2017 – Aug. 2019

Berlin, Germany

Technische Universität Berlin

Bachelor of Science in Computer Science

Oct. 2014 – Mar. 2018

Berlin, Germany

Select Peer-Reviewed Publications

- T. Pfandzelter and D. Bermbach, “CELESTIAL: Virtual Software System Testbeds for the LEO Edge,” in *Proceedings of the 23rd ACM/IFIP International Middleware Conference*, Québec City, Canada, Nov. 2022, pp. 69–81.
- T. Pfandzelter and D. Bermbach, “Edge (of the Earth) Replication: Optimizing Content Delivery in Large LEO Satellite Communication Networks,” in *Proceedings of the 21st IEEE/ACM International Symposium on Cluster, Cloud and Internet Computing (CCGrid ’21)*, Melbourne, Australia, May 2021.
- T. Pfandzelter, J. Hasenburg, and D. Bermbach, “Towards a Computing Platform for the LEO Edge,” in *Proceedings of the 4th International Workshop on Edge Systems, Analytics and Networking (EdgeSys ’21)*, Online, United Kingdom, Apr. 2021.

Experience

Mobile Cloud Computing Research Group,

Technische Universität Berlin & Einstein Center Digital Future

Research Associate

Sep. 2019 – present

Berlin, Germany

- Responsible for the *FogStore* project, which aims to develop a data management middleware for the edge and cloud.
- Extensive development of open-source distributed systems software prototypes in Go and Python.
- Authored and published several peer-reviewed research papers, posters, and articles.
- Supervising student assistants, student projects, and student theses.

Hewlett Packard Labs

Research Associate Intern

May 2022 – Nov. 2022

Milpitas, CA, USA

- Conception and execution of a research project on serverless computing and hardware acceleration.

audibene GmbH

Systems Administrator

Mar. 2015 – Aug. 2019

Berlin, Germany

- Scaled IT infrastructure for a start-up from 200 to more than 1,000 employees globally.
- Research, procurement, development, and administration of internal software and tools while working with different teams across the organization.
- Agile management of IT projects to meet customer needs in a fast-paced environment.
- Development and administration of a hybrid cloud and global enterprise network.

Coca-Cola Erfrischungsgetränke AG

IT Intern

Sep. 2014

Berlin, Germany

- Learned about IT structures and processes in a large corporation.
- Managed my own small project to develop software for internal use.

Technical Skills

Programming: Go (highly proficient), Python, JavaScript, HTML/CSS (proficient), Java, C#

Technologies: Docker, Linux, Networking, Microservices, TCP/IP, Web & Internet, AWS, GCP, Microsoft Azure

Languages

German: Native

English: Fluent

Chinese: Basic