

Patrick Sabanic

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Homepage: <https://sabanic-p.github.io/>
GitHub: <https://github.com/sabanic-p>

Education

Ph.D. in Computer Science (Mai 2023 - Present)

Technical University of Munich, Germany

Advisor: Prof. Dr. Pramod Bhatotia

MSc in Informatics (Oct 2020 - Mar 2023)

Technical University of Munich, Germany

Thesis: Supporting Unikernel-based Microservices at the Edge

Advisor: Dr. Nitinder Mohan, Giovanni Bartolomeo

BSc BSc Informatics (Oct 2016 - Oct 2020)

Technical University of Munich, Germany

Employment

Technical University of Munich, Munich, Germany May 2023 - Present

Research Staff

Ph.D. Research

Advisor: Prof. Dr. Pramod Bhatotia

Topics:

Confidential Serverless Computing

Serverless computing offers compelling advantages, but securely managing sensitive data is a challenge. With this project we aim to combine Confidential Virtual Machines with serverless computing to offer confidential serverless cloud computing.

Accelerated Confidential Inference With the proliferation of compute intensive LLM-based applications, managing of sensitive data becomes more important as more such confidential data is being processed by LLMs in the cloud. With this project we will offer a inference solution that keeps user data privat.

Investigation of Library OSes for ARM CCA With the new ARM CCA (Confidential Compute Architecture) extension, the possibility arises to run Confidential Virtual Machines on edge devices, allowing for security sensitive task. This topic investigates the possibility of using Unikernels to minimize the trusted computing base for confidential applications.

Conference publications

Wallet: Confidential Serverless Computing

Patrick Sabanic, Masanori Misono, Teofil Bodea, Julian Pritzi, Michael Hackl, Dimitrios Stavrakakis, Pramod Bhatotia

NSDI '26 (To Appear)

Supporting Hybrid Virtualization Orchestration for Edge Computing

Giovanni Bartolomeo, Patrick Sabanic, Nitinder Mohan, Jörg Ott

EdgeSys '25

Academic professional experience

BSc/MSc thesis advisor: Supervised 2 MSc in TU Munich

References

Prof. Dr. Pramod Bhatotia

TU Munich, Germany

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Prof. Jörg Ott

TU Munich, Germany

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Prof. Nuno Santos

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