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Vabuk Pahari

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Education

Max Planck Institute for Software Systems, Saarbrücken Germany   September 2020 –
PhD. Candidate, Computer Science. Advised by Dr. Krishna Gummadi

Wesleyan University, Middletown, CT, USA   May 2020
Master of Arts, Computer Science. Coursework: Artificial Intelligence and Applied Topology. Researching the robustness of large theoretical and real-world networks.

Wesleyan University, Middletown, CT, USA   May 2019
Bachelor of Arts, Double Major: Mathematics and Computer Science: GPA: 4.00/4.00. Graduated *Phi Beta Kappa.*

Professional Experience

Chainlink Labs, Research Engineering Intern   July 2022 – December 2022
- Worked on Cross-Chain Interoperability Protocol (CCIP) for securely sending tokens and data between blockchains
- Implemented Smart Contracts in Solidity for Cross-Chain Governance using CCIP
- Researched the dynamics of using different kinds of ERC20 Token Structures for Cross-Chain Bridges

Wesleyan University, *RIS Summer Fellow,* Middletown, CT   May 2018 – August 2018
- Lead research on the devolution of connected components in large random networks in local, targeted, and random attacks by running simulations.
- Analyzed various real-world road networks by comparing them to theoretical models and observing the performance of the network under different kinds of node failures.

Infineon Technologies, *Intern*, Munich, Germany   June 2017—August 2017
- Wrote a library in C++ for the Optiga Trust E, a security chip, and the TLE5012, a magnetic sensor, to communicate with microcontrollers. Results: Optiga Trust E and TLE5012 have both been released
- Implemented a cryptographic library, which carries out the public key authentication scheme using the open-source WolfSSL library and the X.509 certificate stored in the Optiga Trust E.

Publications and Pre-prints

Becoming Immutable: How Ethereum is Made
Vabuk Pahari and Andrea Canidio.
Pre-print: https://arxiv.org/abs/2506.04940
Non-archival: CBER Crafting the Cryptoeconomy Conference, Columbia University, New York, USA, October 2025

How Exclusive are Ethereum Transactions? Evidence from non-winning blocks
Vabuk Pahari and Andrea Canidio.
Pre-print: https://arxiv.org/abs/2509.16052
Non-archival: Futures of Money II, Paris, May 2025

On the Governance of Decentralized Autonomous Organizations
Vabuk Pahari, Balakrishnan Chandrasekaran, Abhisek Dash, Krishna P. Gummadi, and Johnnatan Messias.
Non-archival: The Latest in DeFi Reseach (TLDR), May 2025

Non-Atomic Arbitrage in Decentralized Finance
Vabuk Pahari, Lioba Heimbach, and Eric Schertenleib
In IEEE Symposium on Security and Privacy (SP), San Francisco, CA, USA, May 2024
Non-archival: 4th Workshop on Decentralized Finance (DeFi), May 2025

Dissecting Bitcoin and Ethereum Transactions: On the Lack of Transaction Contention and Prioritization Transparency in Blockchains
Johnnatan Messias, Vabuk Pahari, Balakrishnan Chandrasekaran, Krishna P. Gummadi, and Patrick Loiseau.
In Proceedings of the Financial Cryptography and Data Security (FC 2023). Bol, Brač, Croatia.

Understanding Blockchain Governance: Analyzing Decentralized Voting to Amend DeFi Smart Contracts
Johnnatan Messias, Vabuk Pahari, Balakrishnan Chandrasekaran, Krishna P. Gummadi, and Patrick Loiseau.
Pre-print. 2025. https://arxiv.org/pdf/2305.17655

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TEACHING EXPERIENCES

- **Distributed Systems** 2025 – Teaching Assistant
- **Blockchain and Decentralized Finance** 2023 – Teaching Assistant; Won Busy Beaver Award at University of Saarland
- **Introduction to Computer Science** 2017 – Teaching Assistant
- **Computer Science I** 2018 – Teaching Assistant
- **Design of Programming Languages** 2019 – Teaching Assistant