FLORIAN SURI-PAYER

PhD - Computer Science - Cornell University

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EDUCATION

Doctor of Philosophy (Ph.D.), Computer Science   *August 2018 - August 2025*
Research Area: Distributed Systems
Supervised by Lorenzo Alvisi & Natacha Crooks
Cornell University, Ithaca, USA   GPA: 4.2

Bachelor of Science (B.Sc.), Computer Science.   *October 2015 - August 2018*
Thesis: *Unsupervised Anomaly Detection using ARIMA Forecasting*
Supervised by Florian Schmidt & Odej Kao
TU Berlin, Berlin, Germany   Grade 1.18 (summa cum laude)

RESEARCH INTERESTS

My passion lies in analytical thinking and formal rigor as applied to practical computing systems. My current research addresses the design of scalable and robust distributed systems, specifically efficient Byzantine fault tolerance, and low latency transaction processing with high throughput.

AWARDS AND HONORS

BS Thesis recognition and Honors list, TU Berlin.   *2018*
Ranked Top 1% of all graduating students across all fields of studies. Thesis with distinction (1.0).
Nominated (2x) to German Academic Scholarship Foundation   *2015 & 2018*
Top 5% of students across all fields of studies across Germany.
High School Valedictorian Honors   *2015*
Highest achievable summa cum laude grade (1.0) in national-level exams.

PUBLICATIONS

[Ph.D. Dissertation] Building Databases with Distributed Trust
Florian Suri-Payer

[SOSP'25] Pesto: Cooking up High Performance BFT Queries
Florian Suri-Payer, *Neil Giridharan, Liam Arzola, Shir Cohen, Lorenzo Alvisi, and Natacha Crooks.*

[NSDI'25] Shoal++: High Throughput DAG BFT Can Be Fast!
Balaji Arun, Zekun Li, **Florian Suri-Payer**, *Sourav Das, Alexander Spiegelman.*

[SOSP'24] Autobahn: Seamless high speed BFT
Florian Suri-Payer*, *Neil Giridharan*, Ittai Abraham, Lorenzo Alvisi, and Natacha Crooks. *Equal.*
– ***Adopted in production*** by Improbable, Hyli, Commonware, Stable and Sei

[Eurosys'23] Morty: Scaling Concurrency Control with Re-Execution
Matthew Burke, **Florian Suri-Payer**, *Jeffrey Helt, Lorenzo Alvisi, and Natacha Crooks.*

[PODC'23] BeeGees: Stayin Alive in Chained BFT
Neil Giridharan, **Florian Suri-Payer**, *Ittai Abraham, Natacha Crooks, and Heidi Howard.*

[SOSP'21] Basil: Breaking up BFT with ACID (transactions)
Florian Suri-Payer, *Matthew Burke, Zheng Wang, Yunhao Zhang, Lorenzo Alvisi, and Natacha Crooks.*

[UCC Companion'18] Unsupervised Anomaly Event Detection for Cloud Monitoring Using Online Arima

Florian Schmidt, **Florian Suri-Payer***, Anton Gulenko, Marcel Wallschlager, Alexander Acker and Odej Kao.*

[CloudCom'18] Unsupervised Anomaly Event Detection for VNF Service Monitoring Using Multivariate Online Arima

Florian Schmidt, **Florian Suri-Payer***, Anton Gulenko, Marcel Wallschlager, Alexander Acker and Odej Kao.*

RELEVANT WORK EXERIENCE

Databricks: Software Engineer *August 2025-present*
Mountain View, USA

- Caching Team, led by Atul Adya
- Working on Dicer, Databricks' distributed auto-sharding system.

AptosLabs: Research Intern *May-August 2023*
Palo Alto, USA

- Blockchain Research Group, supervised by Alexander Spiegelman
- I contributed improvements to the core consensus protocol deployed at Aptos, and are now pending deployment. Additionally, I designed novel transaction mechanisms that reduce latency by a factor of 2x (details confidential).

UC Berkeley: Visiting Researcher *March-May 2022*
Berkeley, USA

- RISELab, Data Systems and Foundation Group, supervised by Natacha Crooks
- My research work spanned the design of Byzantine Fault Tolerant consensus and the design and implementation of distributed databases. See publications for a comprehensive list.

Microsoft Research Cambridge: Research Intern *June-August 2021*
Cambridge, UK

- Confidential Computing Group, supervisied by Antoine Delignat-Lavaud & Cedric Fournet
- I contributed to the design and advancement of Microsoft's Confidential Consortium Framework; this included efforts to improve robustness, scale, and latency (details confidential).

Cornell University Graduate Researcher *August 2018 - August 2025*
Ithaca, USA

- Laboratory for Advanced Systems Research, supervised by Lorenzo Alvisi
- My research focuses on the design of distributed transaction systems, as well as Byzantine Fault Tolerant protocols (both for consensus and databases). See publications for a comprehensive list.

TECHNICAL & SOFT SKILLS

- **Independent problem solving skills**, as exercised in day to day research work, and demonstrated by project work and publications.

- **Strong communication abilities**. Extensive experience giving high profile talks, teaching students in class room and office hour settings, as well as research collaborations. Substantial writing experience through paper writing, grant applications, and tech-blog posts.

- **Leadership experience**, both in a research setting – mentoring multiple undergrads –, and teaching setting – managing class organization, TA coordination, and exam design.

- **Programming Skills:** C++/C, Java, Python, Rust

- **Auxiliary Tools:** Latex, Git, MS Office, CloudLab

LANGUAGES

English – Native, German – Native, French: Working Knowledge (Delf B1)