FLORIAN SURI-PAYER

Distributed Systems Engineer & Researcher · Ph.D., Cornell Computer Science
LinkedIn, Web
+1 (607) 882 0093 ⋄ fsp@cs.cornell.edu

EDUCATION

Doctor of Philosophy (Ph.D.), Computer Science *August 2018 - August 2025*
Research Area: Distributed Systems
Dissertation: *Building Databases with Distributed Trust*
Advisors: Lorenzo Alvisi & Natacha Crooks
Cornell University, Ithaca, NY, USA

Bachelor of Science (B.Sc.), Computer Science. *October 2015 - August 2018*
Research Area: Cloud Infrastructure & ML Systems
Thesis: *Unsupervised Anomaly Detection using ARIMA Forecasting*
Advisors: Florian Schmidt & Odej Kao
TU Berlin, Berlin, Germany

RESEARCH INTERESTS

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

AWARDS AND HONORS

ACM Dennis M. Ritchie Doctoral Dissertation Award *2026*
Awarded by ACM SIGOPS for the best PhD dissertation in Software Systems research.

Cornell CS Dissertation Award *2026*
Awarded for outstanding PhD dissertation research in Cornell Bowers Computer Science.

BS Thesis recognition and Honors list, TU Berlin. *2018*
Ranked in the top 1% of all graduating students university-wide. Thesis with distinction (grade 1.0).

German Academic Scholarship Foundation Nomination (2x) *2015, 2018*
Top 5% of students across all fields of studies across Germany.

PUBLICATIONS

[**SOSP'26**] Sintr: Safe Interactive Transactions in the Presence of Byzantine Clients
Austin Li, Daniel Lee, Lorenzo Alvisi, Natacha Crooks, and **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 EXPERIENCE

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

- Caching Team, led by Atul Adya
- Building scalable distributed infrastructure for stateful systems, including **Dicer**, Databricks distributed auto-sharding engine that ensures high availability and low-latency load balancing.

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

- Blockchain Research Group, supervised by Alexander Spiegelman
- Engineered algorithmic improvements and novel transaction mechanisms for Aptos's core consensus protocol, cutting latency by up to 2x.

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

- RISELab, Data Systems and Foundation Group, led by Natacha Crooks
- Conducted research spanning the design of Byzantine Fault Tolerant (BFT) consensus protocols and the implementation of highly resilient distributed databases.

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

- Confidential Computing Group, supervised by Antoine Delignat-Lavaud & Cédric Fournet
- Investigated design enhancements for Microsoft's Confidential Consortium Framework (**CCF**), exploring techniques to optimize robustness, scale, and latency.

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

- Laboratory for Advanced Systems Research, led by Lorenzo Alvisi
- My research focused on the design of distributed transaction systems and Byzantine Fault Tolerant protocols for consensus and database systems. Throughout my work, I mentored numerous junior PhD and Master's students, as well as several undergraduate students.

ACADEMIC SERVICE

- Program Committees: OSDI'27, SOSP'26

- Journal Reviewer: Distributed Computing'23, ACM TOCS'20
- Sub-reviewer: EuroSys'24, OSDI'20, SOSP'19

RELEVANT TEACHING EXPERIENCE

Operating Systems (CS4410), Cornell University, *Head Teaching Assistant* *2019, 2020*
Object Oriented Programming (CS2110), Cornell University, *Head Teaching Assistant* *2018*
Object Oriented Programming Practicum (CS2111), Cornell University, *Co-instructor* *2018*
Algorithms and Data Structures, TU Berlin, *Teaching Assistant* *2018*
Discrete Structures, TU Berlin, *Teaching Assistant* *2017*
Computability and Complexity, TU Berlin, *Teaching Assistant* *2017*
Formal Languages and Automata, TU Berlin, *Teaching Assistant* *2016*

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 classroom and office-hour settings, and leading research collaborations. Substantial writing experience through paper authorship, grant applications, and tech-blog posts.
- **Leadership experience**, both in a research setting—mentoring over 10 junior grad students and undergrads—and in a teaching setting—managing class organization, TA coordination, and exam design.
- **Programming Skills:** C++/C, Java, Scala, Python, Rust
- **Auxiliary Tools:** LaTeX, Git, MS Office, CloudLab

LANGUAGES

English (Native), German (Native), French (Working Knowledge, DELF B1)

CITIZENSHIP

United States, Austria (Unrestricted US and EU work authorization)