Davide Rovelli

> PhD student in Distributed Systems

Expert in computing systems R&D, currently specializing in the interplay between hardware and software for datacenter services. Wide background, team-worker, versatile

Como, IT

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https://github.com/daviderovell0

Work experience

now ↑ Jun 2022

Research collaborator at Cloud innovation office

SAP

Walldorf, DE (remote)

- Lead researcher in SAP-Intel collaboration on prototyping an accelerator on FPGA-NIC for consistent replication [1].
- Linux kernel application developer, lead researcher for datacenter failure detector prototype [2].

Jul 2025 ↑ Apr 2025

Research intern - Next Generation Systems and Cloud

IBM research Ireland

Dublin, IE

- Lead researcher in CXL-based disaggregated memory replication system

May 2022 ↑ Sep 2020

HPC systems engineer, research engineer

ICI – Ecole Centrale de Nantes

Nantes, FR

- Administration and full-stack development of services and applications of a supercomputer system, increasing usability to power future scientific research.
- Certified NVIDIA DLI ambassador for Deep Learning fundamentals.

Aug 2020 ↑ Jun 2020

Deep learning research intern

University of Glasgow

Glasgow, UK

- Development and training of a DNN for a novel 3D image reconstruction application using Tensorflow.

Education

now ↑ Jun 2022

PhD student in Distributed Systems (4th year)

USI – Università della Svizzera Italiana

Lugano, CH

- Selective synchrony for datacenters: hybrid-time systems for efficient coordination algorithms (e.g. failure detection, consensus) [3].
- Specialized in kernel-bypass technologies, low-level networking, SmartNIC offloading and in-network computing.
- 7 theses and projects supervision

Jun 2020 ↑ Sep 2015

MEng Electronics and Software Engineering

University of Glasgow

Glasgow, UK

- First-class degree.

References

patrick.thomas.eugster@usi.ch (USI), pj@turba.ai (SAP), christian.pinto@ibm.com (IBM)

Tech skills

Systems: Linux, bash, C/C++, build tools (make, CMake), Rust, Cuda
Multi-paradigm: Python, Javascript
Networking: RDMA, eBPF, SmartNIC acceleration
DevOps: Docker, Singularity, Vagrant, Ansible, Kubernetes
HPC: Slurm, MPI
Electronics: FPGA design (VHDL, SV, simulation), KiCAD
Data science: Tensorflow, Jupyter, NumPy, Matplotlib
Other: Jira, Office, LateX

Languages

English: ●●●●●
Italian: ●●●●●
French: ●●●●○

Selected Publications

[1] Nano-consensus: ultra-fast, quorum-less coordination on the wire; *Rovelli et al.*; **SoCC '25**

[2] FiDe: Reliable and Fast Crash Failure Detection to Boost Datacenter Coordination (link); *Rovelli et al.*; **ATC '25**

[3] Digital Cluster Circuits for Reliable Datacenters (link); *Rovelli, Eugster*; **DSN-S '25**

Hobbies

- Rowing & football
- Music production and instrument making