Research Goals

- Rethinking abstractions to design the next generation of systems software
- Building real systems that are robust and can scale while achieving high performance

Performant

- Enable high scalability using fine-grained concurrency
- Build interfaces to leverage modern hardware transparently - e.g., Persistent Memory, CXL

Designing abstractions for the next generation of Evolving Systems Software

Robust Scalable Software Systems Lab

Customisable

- Workload-awareness via performance counting
- Update hot-path on the fly
- Adapt based on user policy

Verifiable

- Leverage safe runtimes and memory safe languages
- Allow rich semantics for customisability
- Ensure customisation semantics preserve correctness invariants

Syncord, OSDI’22

OdinFS, OSDI’22
NrOs, SOSP’21
PACTree, OSDI’21