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## 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

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

# 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

Syncord, OSDI'22

### Verifiable

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



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