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CONTACT

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PUBLICATIONS

Splinter: Bare-Metal Extensions for Multi-Tenant Low-Latency Storage **OSDI 2018**
Chinmay Kulkarni, Sara Moore, Mazhar Naqvi, Tian Zhang, Robert Ricci, and Ryan Stutsman

Rocksteady: Fast Migration for Low-latency In-memory Storage **SOSP 2017**
Chinmay Kulkarni, Aniraj Kesavan, Tian Zhang, Robert Ricci, and Ryan Stutsman

EDUCATION

University of Utah . . . . Salt Lake City, USA
Doctor of Philosophy in Computer Science, Ongoing
Advised by Prof. Ryan Stutsman

Indian Institute of Technology . . . . Bombay, India
Master of Technology in Computer Science, June 2016

National Institute of Technology . . . . Surathkal, India
Bachelor of Technology in Electronics and Communication, May 2013

RESEARCH

Scaling an Operating System to Many Cores
VMware Research and University of Utah, May 2019 - Present
Collaborating with VMware Research on a many-core operating system written in Rust. Our system currently boots on a single core. We are now exploring whether we can apply existing log-based, data structure replication techniques to achieve good many-core operating system scalability.

SoFASTER: Scaling Out the FASTER Key-Value Store
Microsoft Research and University of Utah, May 2018 - Present
Collaborating with Microsoft Research on scaling out FASTER, a key-value store that uses a latch free hash table and a concurrent log-structured record store to service 160 million updates per second. Challenges include maintaining high throughput during scale-up and scale-down operations.

Splinter: Bare-Metal Extensions for Multi-Tenant Low-Latency Storage
University of Utah, November 2017 - November 2018
Worked on Splinter, a multi-tenant low-latency store that can be extended using type- and memory-safe code written in Rust. Splinter can isolate more than 1000 tenants per server while servicing 3.5 million operations per second with a median latency of 9 microseconds.

Rocksteady: Fast Migration for Low-latency In-memory Storage
University of Utah, October 2016 - October 2017
Designed, implemented, and evaluated Rocksteady, a fast and low impact migration protocol for the RAMCloud in-memory key-value store. Rocksteady can migrate 256 GB of data in less than six minutes while maintaining a tail latency of less than 250 microseconds.

INDUSTRY

VMware Research . . . . Research Intern, Summer 2019, Palo Alto, USA

Microsoft Research . . . . Research Intern, Summer 2018, Redmond, USA

Cisco Systems . . . . Software Engineer, Fall 2013, Bangalore, India

AWARDS

Google PhD Fellowship
Systems and Networking, 2019