QINGNAN DUAN | RESUME

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Objective: **None**
More details at https://github.com/duanqn/Publish

Education

Tsinghua University | Computer Science and Technology | Bachelor's degree 2014.8 – 2018.7
Distinguished graduate in the department of CST

Tsinghua University Economy (minor) 2015.9 – 2018.7

University of Waterloo | Computer Science | Master's degree 2018.7 – present
Supervisor: Bernard Wong Srinivasan Keshav | Consensus protocol / Blockchain
Expected graduation date: April, 2020

Project Experience

Gemini: Improving the Performance of Sharded Ledgers 2018.10 – 2019.1
Sharding is a common technique in data management systems, which has recently been applied to distributed ledgers. OmniLedger is a recent work that uses sharding to improve its scalability. We introduce shard ownership scheduling and in-network state aggregation in order to achieve better performance in high cross-shard transaction rate and high contention workloads. Our simulation on Retwis workload shows that our system has 20X higher throughput.
Workshop paper submitted to HotOS 2019 (second author)

SuperFabric 2019.1 – present
We are planning to extend FastFabric to further improve the throughput of Hyperledger Fabric.

Hyperledger Fabric Benchmarking with Non-deterministic Sending Rate 2018.10 – 2018.12
Previous work uses workload with constant transaction arrival rates, which may be different from real life scenarios. According to Queueing theory, the interval between transactions follow a Poisson distribution. We modified a workload generator, Hyperledger Caliper to generated such workloads and tested the performance of Hyperledger Fabric.

Internship

SDE Intern, Microsoft WDGAE 2017.6 – 2017.8
Mentor: Yi Zhou / Manager: Jing-Kane Li
Incorporates Windows 10 with SwiftKey, using asynchronous requests and local cache to fully utilize available network bandwidth.

Awards & Scholarships

Individual Scholarship Department of CST, Tsinghua University 2015.10

Distinguished Graduate Department of CST, Tsinghua University 2018.6

David R. Cheriton Scholarship Cheriton School of Computer Science, UWaterloo 2018.10

Volunteer Experience

2018 Concours Mondial de Bruxelles, Sommelier 2018.5