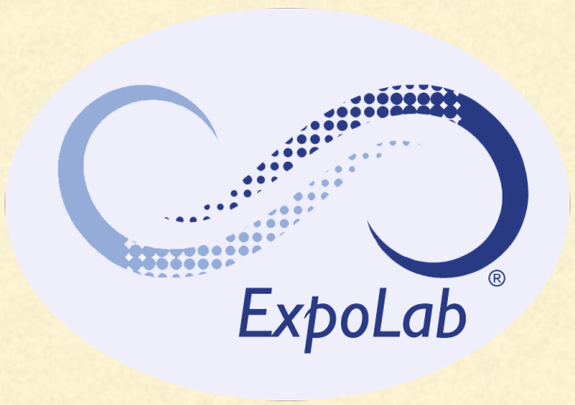
Exploratory Systems Lab
UC Davis

Mohammad Sadoghi



NorCal DB Day 2018
May 4, 2018

UC DAVIS
UNIVERSITY OF CALIFORNIA

ExpoLab Members

Mohammad Sadoghi

(Principal Investigator)

Suyash Gupta, PhD

(Blockchain)

Thamir Qadah, PhD

(Coordination-free Concurrency)

Masoud Hemmatpour, PhD

(RDMA KV-Stores)

Domenic Cianfichi, MSc

(Blockchain)

Shreenath Iyer, MSc

(Blockchain)

Robert He, MSc

(Coordination-free Concurrency)

Patrick Liao, BSc

(Blockchain)

Sajjad Rahnama, PhD

(Blockchain, Fall'18)

Nikhil Wadhwa, PhD

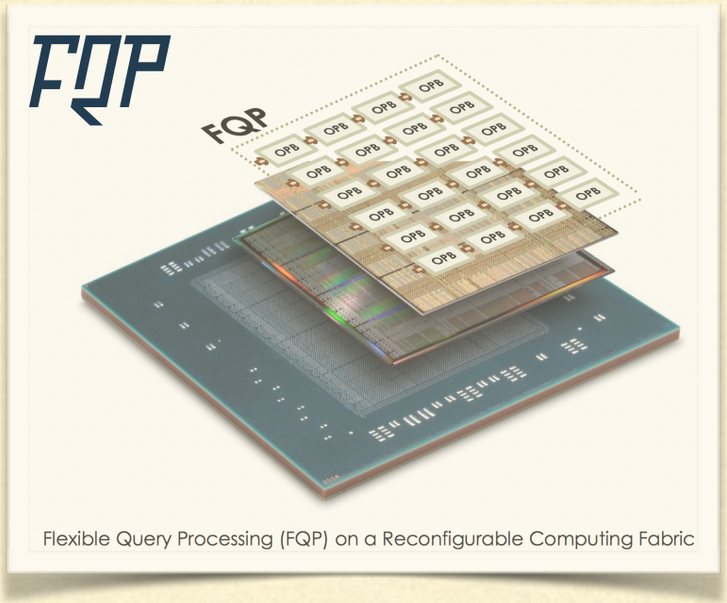
(Blockchain, Fall'18)

Graph VOLTDB

GRFusion
(Native Graph Engine on VoltDB)

ExpoDB®

Exploratory Data Platform
(*ExpoDB*)



Flexible Query Processor
(*FQP*)

A distributed, replicated, in-memory database

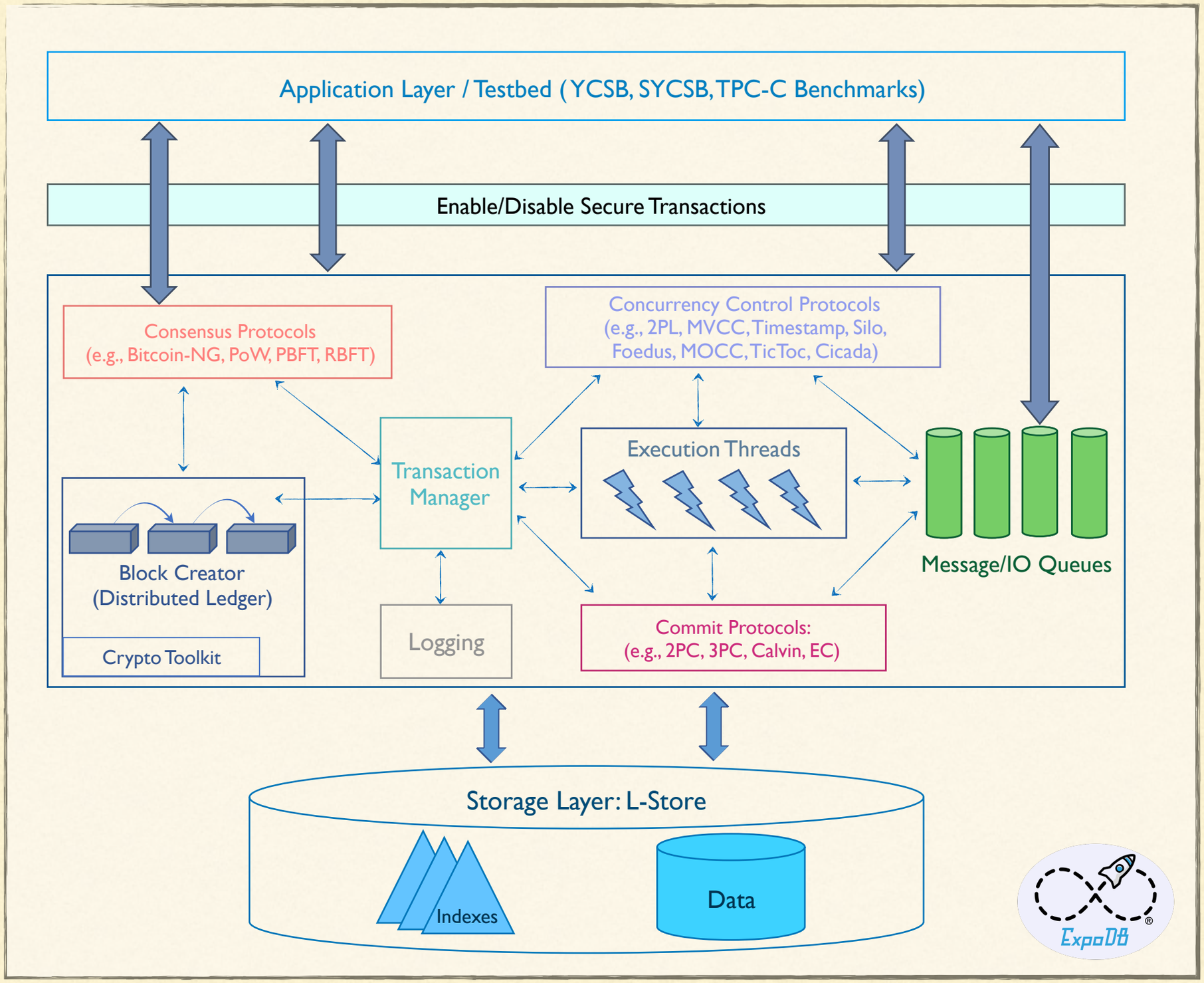
A concurrency, agreement, and consensus protocols testbed

A distributed ledger, secure transactional capabilities

A decentralized platform (no central authority), a democratic computational model

A unified transactional and analytical storage architecture (HTAP)

EXPLORATORY DATA PLATFORM (*EXPODB*)



ExpoLab Recent Activities

- *ExpoDB: An Exploratory Data Platform*. Suyash Gupta, Domenic Cianfichi, Patrick Liao, Shreenath Iyer, Mohammad Sadoghi (UC Davis)

- *L-Store: A Real-time OLTP and OLAP System*. Mohammad Sadoghi (UC Davis), S. Bhattacherjee (U. Maryland, College Park), B. Bhattacharjee (IBM Research), M. Canim (IBM Research) - *EDBT'18*

- *EasyCommit: A Non-blocking Two-phase Commit Protocol*. Suyash Gupta, Mohammad Sadoghi (UC Davis) - *EDBT'18*

- *EmbedS: Scalable and Semantic-Aware Knowledge Graph Embeddings*. Gonzalo I. Diaz (Oxford U.), Achille Fokoue (IBM Research), Mohammad Sadoghi (UC Davis) - *EDBT'18*

- *A Scalable Circular Pipeline Design for Multi-Way Stream Joins in Hardware*. Mohammadreza Najafi (TUM), Hans-Arno Jacobsen (TUM), Mohammad Sadoghi (UC Davis) - *ICDE'18*

- *Extending In-Memory Relational Database Engines with Native Graph Support*. M. Hassan, T. Kuznetsova, H.-C. Jeong, W. Aref, Mohammad Sadoghi. - *EDBT'18, SIGMOD'18*.

Thank You

https://msadoghi.github.io/