

EXPLORATORY SYSTEMS LAB

UC DAVIS

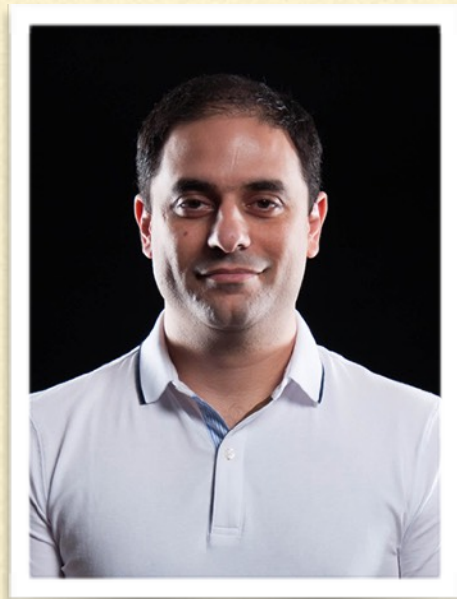
Mohammad Sadoghi



NorCal DB Day 2018
May 4, 2018

UC DAVIS
UNIVERSITY OF CALIFORNIA

ExpoLab Members



Mohammad Sadoghi
(Principal Investigator)



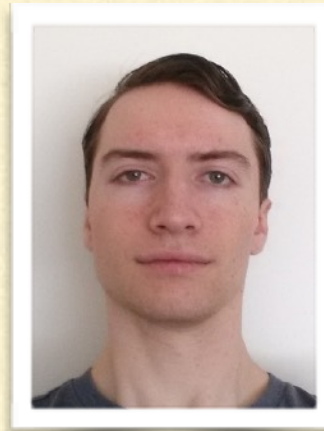
Suyash Gupta, PhD
(Blockchain)



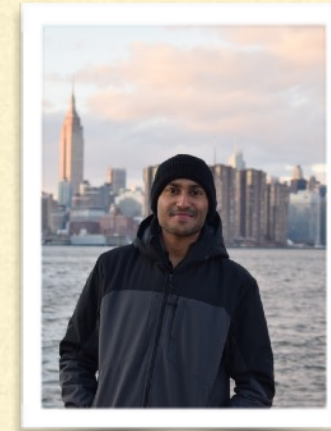
Thamir Qadah, PhD
(Coordination-free Concurrency)



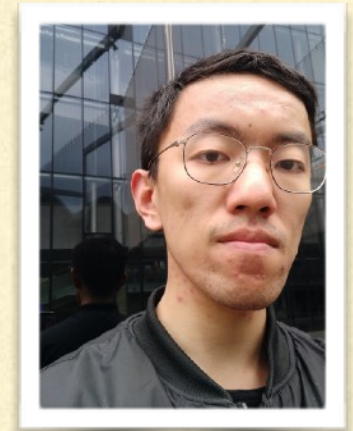
Masoud Hemmatpour, PhD
(RDMA KV-Stores)



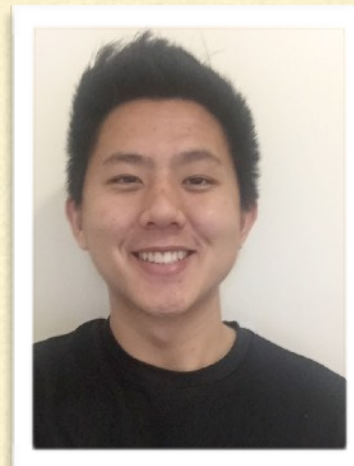
Domenic Cianfichi, MSc
(Blockchain)



Shreenath Iyer, MSc
(Blockchain)



Robert He, MSc
(Coordination-free Concurrency)



Patrick Liao, BSc
(Blockchain)



Sajjad Rahnema, PhD
(Blockchain, Fall'18)



Nikhil Wadhwa, PhD
(Blockchain, Fall'18)

System Faculties at UC Davis



Matt Farrens
(Computer Architecture)



Jason Lowe-Power
(Computer Architecture)

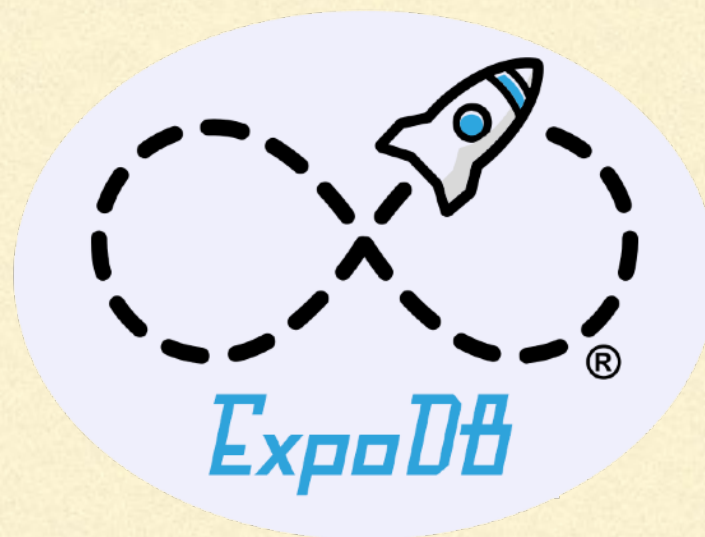


Sam King
(Operation System, Security)

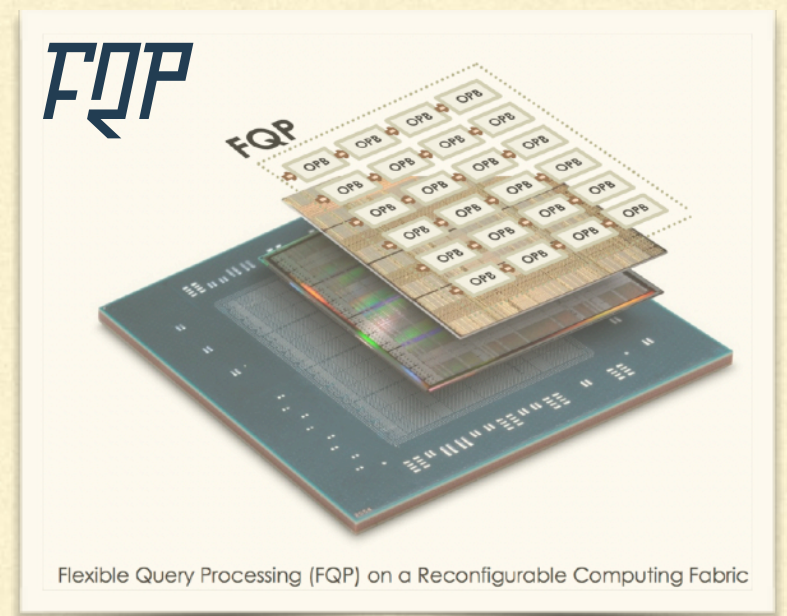


GRFusion

(Native Graph Engine on VoltDB)



Exploratory Data Platform
(*ExpoDB*)



Flexible Query Processor
(*FQP*)

A distributed, replicated, in-memory database

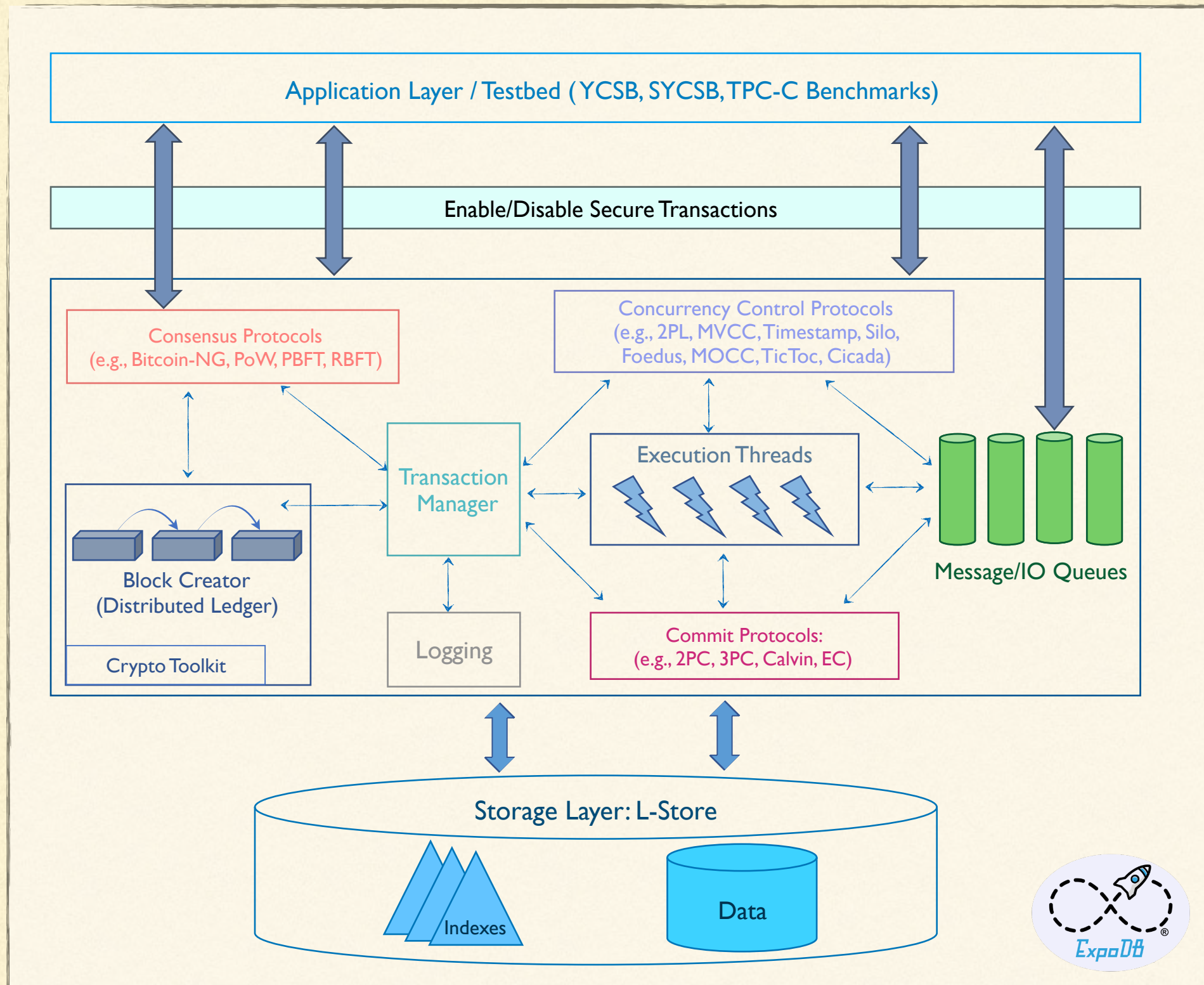
A concurrency, agreement, and consensus protocols testbed

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 POSTERS

- *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. Bhattacharjee (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/>

