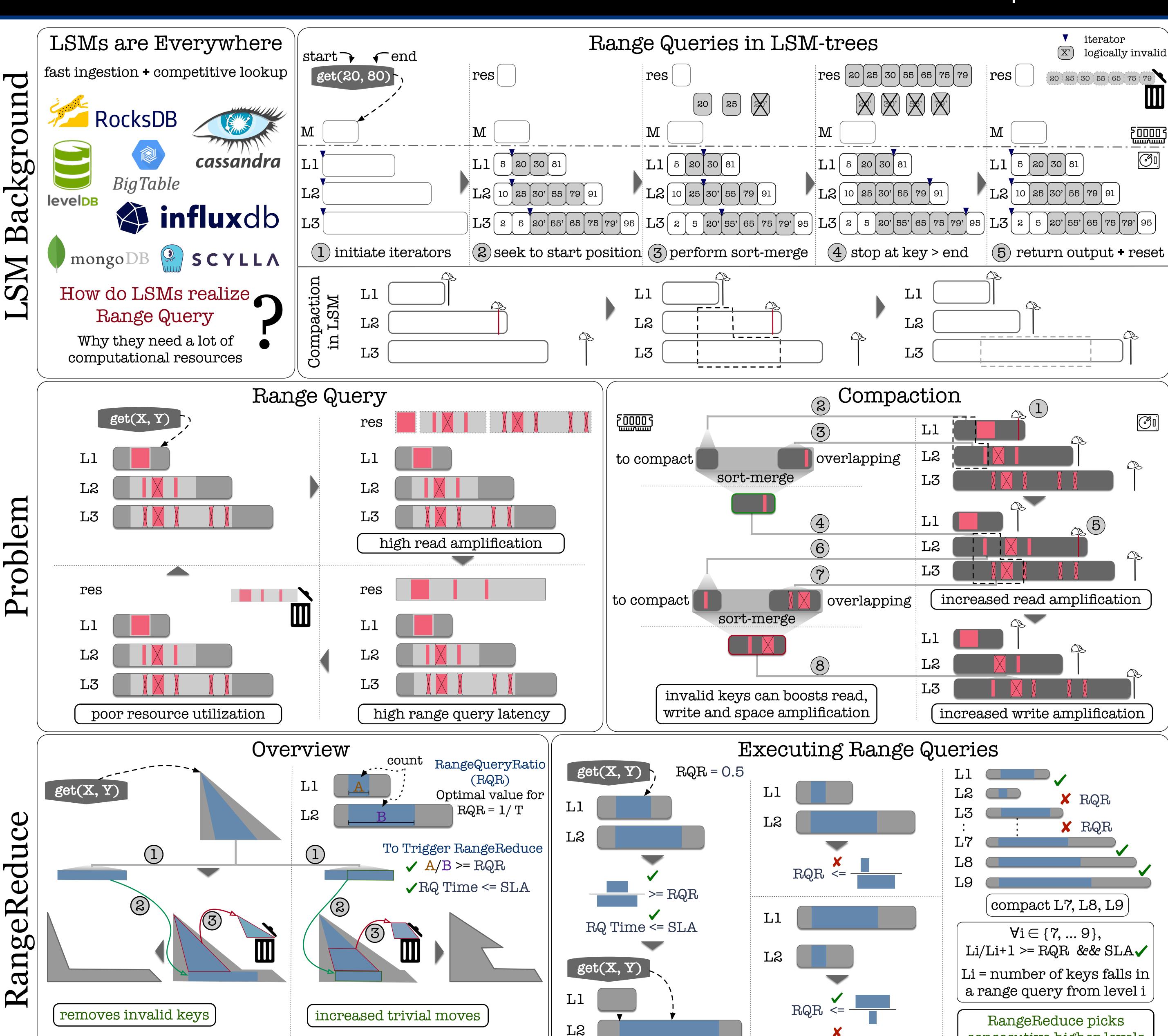
RangeReduce: Range Query Driven Compactions in LSM-Engines

Shubham Kaushik

Manos Athanassoulis

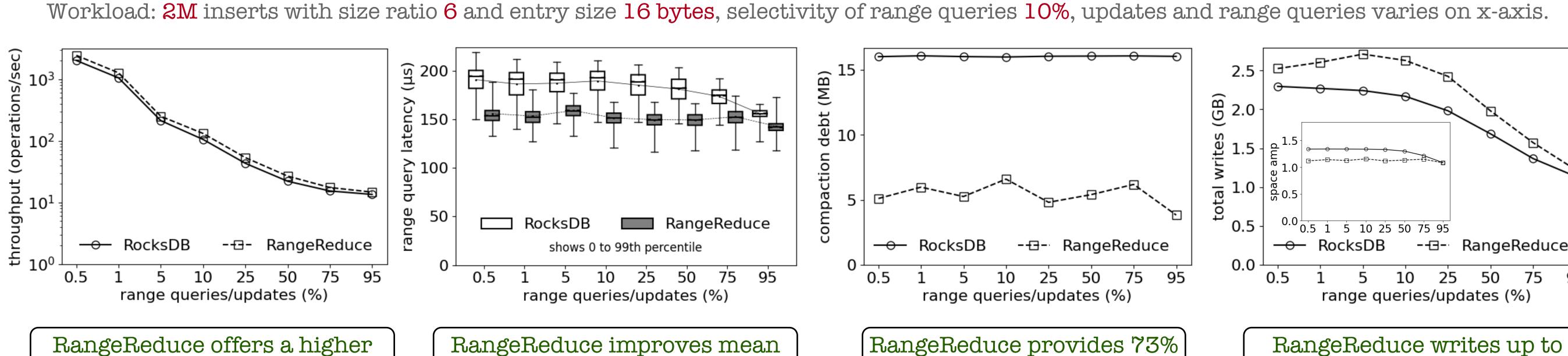
Subhadeep Sarkar



Performance Evaluation

scanning one level makes

query more efficient



range query latency up to 20%



Val



22% more than RocksDB

--⊟- RangeReduce

consecutive higher levels

fewer invalid keys

improves compactions

RQ Time <= SLA

better compaction debt

RocksDB range query

throughput than RocksDB

better space amplification

better read amplification

good range query latency

comparable write amplification