19th USENIX Conference on File and Storage Technologies (FAST '21) February 23–25, 2021

Tuesday, February 23
Indexing and Key-Value Store
ROART: Range-query Optimized Persistent ART
SpanDB: A Fast, Cost-Effective LSM-tree Based KV Store on Hybrid Storage
Evolution of Development Priorities in Key-value Stores Serving Large-scale Applications:
The RocksDB Experience
REMIX: Efficient Range Query for LSM-trees
Advanced File Systems
High Velocity Kernel File Systems with Bento
Scalable Persistent Memory File System with Kernel-Userspace Collaboration
Rethinking File Mapping for Persistent Memory
pFSCK: Accelerating File System Checking and Repair for Modern Storage
Pattern-Guided File Compression with User-Experience Enhancement for Log-Structured File System on
Mobile Devices
Wednesday, February 24
Transactions, Deduplication, and More
ArchTM: Architecture-Aware, High Performance Transaction for Persistent Memory
SPHT: Scalable Persistent Hardware Transactions
The Dilemma between Deduplication and Locality: Can Both be Achieved?

Wang, Harbin Institute of Technology, Shenzhen

Remap-SSD: Safely and Efficiently Exploiting SSD Address Remapping to Eliminate Duplicate Writes
CheckFreq: Frequent, Fine-Grained DNN Checkpointing
Cloud and Distributed Systems
Facebook's Tectonic Filesystem: Efficiency from Exascale
Exploiting Combined Locality for Wide-Stripe Erasure Coding in Distributed Storage
On the Feasibility of Parser-based Log Compression in Large-Scale Cloud Systems
CNSBench: A Cloud Native Storage Benchmark
Concordia: Distributed Shared Memory with In-Network Cache Coherence
Thursday, February 25
Caching Everywhere
Caching Everywhere eMRC: Efficient Miss Ratio Approximation for Multi-Tier Caching
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Yunho Jin and Sam Son, Seoul National University; Shine Kim, Seoul National University and Samsung Electronics;	
Hakbeom Jang, Samsung Electronics; Tae Jun Ham and Jae W. Lee, Seoul National University	
D2FQ: Device-Direct Fair Queueing for NVMe SSDs	403
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