

FAST '05 TECHNICAL SESSIONS

WEDNESDAY, DECEMBER 14

8:30 a.m. – 9:45 a.m.

WELCOME AND KEYNOTE ADDRESS (TBA)

10:15 a.m.–11:15 a.m.

FILE SYSTEMS SEMANTICS

A Logic of File Systems

Muthian Sivathanu, *Google Inc.*; Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau, Somesh Jha, *University of Wisconsin, Madison*

Providing Tunable Consistency for a Parallel File Store

Murali Vilayannur, Partho Nath, Anand Sivasubramaniam, *Pennsylvania State University*

11:15 a.m.–12:15 p.m.

SENSOR STORAGE

MicroHash: An Efficient Index Structure for Flash-Based Sensor Devices

Demetrios Zeinalipour-Yazti, *University of Cyprus*; Song Lin, Vana Kalogeraki, Dimitrios Gunopulos, Walid Najjar, *University of California, Riverside*

Adaptive Data Placement for Wide-Area Sensing Services

Suman Nath, *Microsoft Research*; Phillip B. Gibbons, *Intel Research Pittsburgh*; Srinivasan Seshan, *Carnegie Mellon University*

12:15 p.m.–1:45 p.m. Conference Luncheon

1:45 p.m.–3:15 p.m.

FAULT HANDLING

Ursa Minor: Versatile Cluster-based Storage

Michael Abd-El-Malek, William V. Courtright II, Chuck Cranor, Gregory R. Ganger, James Hendricks, Andrew J. Klosterman, Michael Mesnier, Manish Prasad, Brandon Salmon, Raja R. Sambasivan, Shafeeq Sinnamohideen, John D. Strunk, Eno Thereska, Matthew Wachs, and Jay J. Wylie, *Carnegie Mellon University*

Zodiac: Efficient Impact Analysis for Storage Area Networks

Aameek Singh, *Georgia Institute of Technology*; Madhukar Korupolu, Kaladhar Voruganti, *IBM Almaden Research Center*

Journal-guided Resynchronization for Software RAID

Timothy E. Denehy, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau, *University of Wisconsin, Madison*

3:45 p.m.–5:15 p.m.

CACHING

DULO: An Effective Buffer Cache Management Scheme to Exploit Both Temporal and Spatial Localities

Song Jiang, *Los Alamos National Laboratory*; Xiaoning Ding, Feng Chen, Enhua Tan, Xiaodong Zhang, *Ohio State University*

Second-Tier Cache Management Using Write Hints

Xuhui Li, Ashraf Abounaga, Kenneth Salem, *University of Waterloo*; Amer Sachedina, *IBM Toronto Lab*; Shaobo Gao, *University of Waterloo*

WOW: Wise Ordering for Writes—Combining Spatial and Temporal Locality in Non-Volatile Caches

Binny S. Gill, Dharmendra S. Modha, *IBM Almaden Research Center*

THURSDAY, DECEMBER 15

8:30 a.m.–10:00 a.m.

SECURITY

Secure Deletion for a Versioning File System

Zachary N.J. Peterson, Randal Burns, Joe Herring, Adam Stubblefield, Aviel D. Rubin, *The Johns Hopkins University*

TOCTTOU Vulnerabilities in UNIX-Style File Systems: An Anatomical Study

Jinpeng Wei, Calton Pu, *Georgia Institute of Technology*

A Security Model for Full-Text File System Search in Multi-User Environments

Stefan Büttcher, Charles L.A. Clarke, *University of Waterloo*

THURSDAY, DECEMBER 15 (continued)

10:30 a.m.–noon

MULTI-FAULT TOLERANCE

Matrix Methods for Lost Data Reconstruction in Erasure Codes

James Lee Hafner, Veera Deenadhayalan, KK Rao, *IBM Almaden Research Center*; John A. Tomlin, *Yahoo! Research*

STAR: An Efficient Coding Scheme for Correcting Triple Storage Node Failures

Cheng Huang, *Microsoft Research*; Lihao Xu, *Wayne State University*

WEAVER Codes: Highly Fault Tolerant Erasure Codes for Storage Systems

James Lee Hafner, *IBM Almaden Research Center*

Noon–1:30 p.m. Lunch (on your own)

1:30 p.m. – 3:00 p.m.

WORK-IN-PROGRESS REPORTS

3:30 p.m.–5:00 p.m.

ON THE MEDIA

On Multidimensional Data and Modern Disks

Steven W. Schlosser, *Intel Research Pittsburgh*; Jiri Schindler, *EMC Corporation*; Stratos Papadomanolakis, Minglong Shao, Anastassia Ailamaki, Christos Faloutsos, Gregory R. Ganger, *Carnegie Mellon University*

Database-Aware Semantically-Smart Storage

Muthian Sivathanu, *Google Inc.*; Lakshmi N. Bairavasundaram, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau, *University of Wisconsin, Madison*

Managing Prefetch Memory for Data-Intensive Online Servers

Chuanpeng Li, Kai Shen, *University of Rochester*

6:00 p.m.–7:30 p.m.

CONFERENCE RECEPTION

FRIDAY, DECEMBER 16

8:30 a.m.–10:00 a.m.

ON THE WIRE

A Scalable and High Performance Software iSCSI Implementation

Abhijeet Joglekar, Michael E. Kounavis, Frank L. Berry, *Intel Research and Development*

TAPER: Tiered Approach for Eliminating Redundancy in Replica Synchronization

Navendu Jain, Mike Dahlin, *University of Texas at Austin*; Renu Tewari, *IBM Almaden Research Center*

VXA: A Virtual Architecture for Durable Compressed Archives

Bryan Ford, *Massachusetts Institute of Technology*

10:30 a.m.–noon

TOOLS

I/O System Performance Debugging Using Model-driven Anomaly Characterization

Kai Shen, Ming Zhong, Chuanpeng Li, *University of Rochester*

TBBT: Scalable and Accurate Trace Replay for File Server Evaluation

Ningning Zhu, Jiawu Chen, Tzi-cker Chiueh, *Stony Brook University*

Accurate and Efficient Replaying of File System Traces

Nikolai Joukov, Timothy Wong, Erez Zadok, *Stony Brook University*

Noon Conference Ends