



SOSP 2015 Conference Schedule

Welcome to the 25th Symposium on Operating Systems Principles (SOSP 2015)! We have a great schedule of workshops, technical sessions, and poster sessions as well as the usual “hallway track”. Don’t miss the SOSP history retrospective at the Sunday evening reception, as well as the conference banquet Monday evening and dinner and drinks on the beach Tuesday evening.

All SOSP technical sessions will be held in the Serra Ballroom, and breaks will be in the De Anza Foyer. Papers are online at <http://sigops.org/sosp/sosp15> (username “sosp” / password “Carrara”).

We’d like to thank the following companies for their generous sponsorship of SOSP 2015:



Saturday, October 3

5:00 PM–7:00 PM Registration (Portola Lobby)

Sunday, October 4

7:30 AM–5:00 PM Registration (Portola Lobby)

8:30 AM–5:00 PM Workshops
SOSP History Day (Steinbeck Forum)
Diversity Workshop (De Anza I)
HotPower (Redwood Room)
INFLOW (De Anza II)
LADIS (De Anza III)
PLOS (Bonsai I & II)
TRIOS (Cottonwood Room)

12:00 PM–1:00 PM Box Lunch—History Workshop (Steinbeck Foyer)

12:00 PM–1:00 PM Box Lunch—Other workshops (De Anza Foyer)

7:00 PM–9:00 PM Opening Reception & History Retrospective (De Anza Ballroom)
Open to all SOSP, workshop, and History Day participants



Monday, October 5

- 7:30 AM–5:00 PM Registration
- 7:30 AM–8:30 AM Breakfast (De Anza Foyer)
- 8:30 AM–9:00 AM Welcome and Awards (Serra Ballroom)
- 9:00 AM–10:30 AM Formal Systems (Chair: Petros Maniatis)
- IronFleet: Proving Practical Distributed Systems Correct
Chris Hawblitzel, Jon Howell, Manos Kapritsos, Jacob R. Lorch, Bryan Parno, Michael L. Roberts, Srinath Setty, Brian Zill (Microsoft Research)
- Using Crash Hoare Logic for Certifying the FSCQ File System
Haogang Chen, Daniel Ziegler, Tej Chajed, Adam Chlipala, M. Frans Kaashoek, Nikolai Zeldovich (MIT CSAIL)
- SibylFS: formal specification and oracle-based testing for POSIX and real-world file systems
Tom Ridge (University of Leicester), David Sheets (University of Cambridge), Thomas Tuerk (FireEye), Andrea Giugliano (University of Leicester), Anil Madhavapeddy, Peter Sewell (University of Cambridge)
- 10:30 AM–11:00 AM Break
- 11:00 AM–12:30 PM Distributed Transactions (Chair: Tim Harris)
- No compromises: distributed transactions with consistency, availability, and performance
Aleksandar Dragojević, Dushyanth Narayanan, Edmund B Nightingale, Matthew Renzelmann, Alex Shamis, Anirudh Badam, Miguel Castro (Microsoft Research)
- Implementing Linearizability at Large Scale and Low Latency
Collin Lee, Seo Jin Park, Ankita Kejriwal (Stanford University), Satoshi Matsushita (NEC), John Ousterhout (Stanford University)
- Fast In-memory Transaction Processing using RDMA and HTM
Xingda Wei, Jiaxin Shi, Yanzhe Chen, Rong Chen, Haibo Chen (Shanghai Jiao Tong University)
- 12:30 PM–2:00 PM Lunch (De Anza Ballroom)
- 2:00 PM–3:30 PM Distributed Systems (Chair: Marcos Aguilera)
- Paxos Made Transparent
Heming Cui (University of Hong Kong and Columbia University), Rui Gu, Cheng Liu (Columbia University), Tianyu Chen (Tsinghua University), Junfeng Yang (Columbia University)
- E2: A Framework for NFV Applications
Shoumik Palkar, Chang Lan, Sangjin Han (UC Berkeley), Keon Jang (Intel Labs), Aurojit Panda, Sylvia Ratnasamy (UC Berkeley), Luigi Rizzo (Università di Pisa), Scott Shenker (UC Berkeley and ICSI)
- Vuvuzela: Scalable Private Messaging Resistant to Traffic Analysis
Jelle van den Hooff, David Lazar, Matei Zaharia, Nikolai Zeldovich (MIT CSAIL)
- 3:30 PM–4:00 PM Break
- 4:00 PM–5:30 PM Concurrency and Performance (Chair: Emmett Witchel)
- Parallelizing User-Defined Aggregations using Symbolic Execution
Veselin Raychev (ETH Zurich), Madanlal Musuvathi, Todd Mytkowicz (Microsoft Research)
- Read-Log-Update: A Lightweight Synchronization Mechanism for Concurrent Programming
Alexander Matveev (MIT), Nir Shavit (MIT & Tel-Aviv University), Pascal Felber, Patrick Marlier (University of Neuchâtel)
- COZ: Finding Code that Counts with Causal Profiling
Charlie Curtsinger (Grinnell College), Emery D. Berger (University of Massachusetts Amherst)
- 5:45 PM–7:00 PM Poster Session I (Bonsai Ballroom)
- 7:00 PM–9:00 PM Conference Banquet (De Anza Ballroom)



Tuesday, October 6

- 8:30 AM–12:30 PM Registration
- 8:00 AM–9:00 AM Breakfast (De Anza Foyer)
- 9:00 AM–10:30 AM Energy-Aware Systems (Chair: Landon Cox)
- JouleGuard: Energy Guarantees for Approximate Applications
Henry Hoffmann (University of Chicago)
 - Software Defined Batteries
Anirudh Badam, Ranveer Chandra, Jon A. Dutra (Microsoft), Anthony Ferrese (Tesla Motors), Steve Hodges (Microsoft), Pan Hu (University of Massachusetts Amherst), Julia Meinershagen, Thomas Moscibroda, Bodhi Priyantha (Microsoft), Evangelia Skiani (Columbia University)
 - Drowsy Power Management
Matthew Lentz, James Litton, Bobby Bhattacharjee (University of Maryland)
- 10:30 AM–11:00 AM Break
- 11:00 AM–12:30 PM More Distributed Transactions (Chair: Haibo Chen)
- Yesquel: Scalable SQL storage for Web applications
Marcos K. Aguilera (VMware Research Group), Joshua B. Leners (UT Austin, NYU), Michael Walfish (NYU)
 - Building Consistent Transactions with Inconsistent Replication
Irene Zhang, Naveen Kr. Sharma, Adriana Szekeres, Arvind Krishnamurthy, Dan R. K. Ports (University of Washington)
 - High-Performance ACID via Modular Concurrency Control
Chao Xie, Chunzhi Su, Cody Littley, Lorenzo Alvisi (University of Texas at Austin), Manos Kapritsos (Microsoft Research), Yang Wang (Ohio State University)
- 12:30 PM–2:00 PM Lunch (De Anza Ballroom)
- 2:00 PM–3:30 PM Experience and Practice (Chair: Shan Lu)
- Existential Consistency: Measuring and Understanding Consistency at Facebook
Haonan Lu (University of Southern California and Facebook), Kaushik Veeraraghavan, Philippe Ajoux Jim Hunt, Yee Jiun Song, Wendy Tobagus, Sanjeev Kumar (Facebook), Wyatt Lloyd (University of Southern California and Facebook)
 - Virtual CPU Validation
Nadav Amit, Dan Tsafir, Assaf Schuster (Technion — Israel Institute of Technology), Ahmad Ayoub, Eran Shlomo (Intel Corporation)
 - Holistic Configuration Management at Facebook
Chunqiang Tang, Thawan Kooburat, Pradeep Venkatachalam, Akshay Chander, Zhe Wen, Aravind Narayanan, Patrick Dowell, Robert Karl (Facebook Inc.)
- 3:30 PM–4:00 PM Break
- 4:00 PM–5:30 PM Bugs and Analysis (Chair: Brad Karp)
- Failure Sketching: A Technique for Automated Root Cause Diagnosis of In-Production Failures
Baris Kasikci, Benjamin Schubert (EPFL), Cristiano Pereira, Gilles Pokam (Intel Corporation) George Candea (EPFL)
 - Cross-checking Semantic Correctness: The Case of Finding File System Bugs
Changwoo Min, Sanidhya Kashyap, Byoungyoung Lee, Chengyu Song, Taesoo Kim (Georgia Institute of Technology)
 - Pivot Tracing: Dynamic Causal Monitoring for Distributed Systems
Jonathan Mace, Ryan Roelke, Rodrigo Fonseca (Brown University)
- 5:45 PM–7:00 PM Poster Session I (Bonsai Ballroom)
- 7:00 PM–10:00 PM Monterey Beach Party



Wednesday, October 7

8:00 AM–9:00 AM Breakfast (De Anza Foyer)

9:00 AM–10:30 AM Big Data (Chair: Terence Kelly)

Interruptible Tasks: Treating Memory Pressure As Interrupts for Highly Scalable Data-Parallel Programs

Lu Fang, Khanh Nguyen, Guoqing Xu, Brian Demsky (University of California, Irvine),

Shan Lu (University of Chicago)

Chaos: Scale-out Graph Processing from Secondary Storage

Amitabha Roy (Intel), Laurent Bindschaedler, Jasmina Malicevic, Willy Zwaenepoel (EPFL)

Arabesque: A System for Distributed Graph Mining

Carlos H. C. Teixeira, Alexandre J. Fonseca, Marco Serafini, Georgos Siganos, Mohammed J. Zaki,

Ashraf Aboulhaga (Qatar Computing Research Institute)

10:30 AM–11:00 AM Break

11:00 AM–12:30 PM Storage Systems (Chair: Andrew Baumann)

How to Get More Value From Your File System Directory Cache

Chia-Che Tsai, Yang Zhan, Jayashree Reddy, Yizheng Jiao, Tao Zhang,

Donald E. Porter (Stony Brook University)

Opportunistic Storage Maintenance

George Amvrosiadis, Angela Demke Brown, Ashvin Goel (University of Toronto)

Split-Level I/O Scheduling

Suli Yang, Tyler Harter, Nishant Agrawal, Salini Selvaraj Kowsalya, Anand Krishnamurthy,

Samer Al-Kiswany (University of Wisconsin-Madison), Rini T. Kaushik (IBM Research - Almaden),

Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau (University of Wisconsin-Madison)

12:30 PM Conference adjourns (lunch on your own)