The ninth OSDI seeks to present innovative, exciting research in computer systems. OSDI brings together professionals from academic and industrial backgrounds in what has become a premier forum for discussing the design, implementation, and implications of systems software.

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Don’t Miss the Co-Located Workshops

- Diversity ’10: 2nd Workshop on Supporting Diversity in Systems Research, October 2–3
- HotDep ’10: Sixth Workshop on Hot Topics in System Dependability, October 3
- NetEcon ’10: 2010 Workshop on the Economics of Networks, Systems, and Computation, October 3
- SSV ’10: 5th International Workshop on Systems Software Verification, October 6–7
Symposium Program

Monday, October 4
8:30 a.m.—9:00 a.m. Monday
Opening Remarks and Jay Lepreau Best Paper Award
OSDI ’10 Program Co-Chairs: Renzi Arpaci-Dusseau, University of Wisconsin, Madison; Brad Chen, Google, Inc.
9:00 a.m.—10:30 a.m. Monday
Kernels: Past, Present, and Future
Scaling Applications to Many Cores on Linux
Trust and Protection in the Illinois Browser Operating System
Shuo Tang, Haohui Mai, and Samuel T. King, University of Illinois at Urbana-Champaign
FlexSC: Flexible System Call Scheduling with Asynchronous, Exception-Less System Calls
Lixu Soares and Michael Stumm, University of Toronto
10:30 a.m.—11:00 a.m. Break
11:00 a.m.—12:30 p.m. Monday
Inside the Data Center, 1
Finding a Needle in Haystack: Facebook’s Photo Storage
Doug Beaver, Sanjeev Kumar, Harry C. Li, Jason Subel, and Peter Vogel, Facebook Inc.
Availability in Globally Distributed Storage Systems
Nectar: Automatic Management of Data and Computation in Data Centers
Pradeep Kumar Gunda, Lenin Ravindranath, Chandramohan A. Thekkath, Yuan Yu, and Li Zhuang, Microsoft Research Silicon Valley
12:30 p.m.—2:00 p.m. Symposium Luncheon
2:00 p.m.—3:30 p.m. Monday
Security Technologies
System Recovery Using Selective Re-execution
Tae soo Kim, Xi Wang, Nickolai Zeldovich, and M. Frans Kaashoek, MIT CSAIL
Static Checking of Dynamically-Varying Security Policies in Database-Backed Applications
Adam Chipala, Impedisive LLC
Accountable Virtual Machines
Andreas Haeberlen, University of Pennsylvania; Paarjaat Aditya, Rodrigo Rodrigues, and Peter Druschel, Max Planck Institute for Software Systems (MPI-SWS)
3:30 p.m.—4:00 p.m. Break
4:00 p.m.—5:30 p.m. Monday
Concurrency Bugs
Bypassing Races in Live Applications with Execution Filters
Jingyue Wu, Heming Cui, and Junfeng Yang, Columbia University

Effective Data-Race Detection for the Kernel (and Beyond)
John Erickson, Madanlal Musuvathi, Sebastian Burckhardt, and Kirk Olynik, Microsoft Research
Ad Hoc Synchronization Considered Harmful
Weiwei Xiong, University of Illinois at Urbana-Champaign; Soyeon Park, Jiaqi Zhang, and Yuanyuan Zhou, University of California, San Diego; Zhiquan Ma, Matthew Frank, Bob Kuhn, and Paul Petersen, Intel
6:00 p.m.—7:30 p.m. Poster Session & Happy Hour
7:30 p.m.—9:00 p.m. Research Vision Session

Tuesday, October 5
9:00 a.m.—10:30 a.m. Tuesday
Deterministic Parallelism
Deterministic Process Groups in doS
Tom Bergan, Nicholas Hunt, Luis Ceze, and Steven D. Gribble, University of Washington
Efficient System-Enforced Deterministic Parallelism
Amritty Avram, Shu-Chun Weng, Sen Hu, and Bryan Ford, Yale University
Schedule Deterministic Multithreading Through Stable Deterministic Memoization
Heming Cui, Jingyue Wu, and Junfeng Yang, Columbia University
10:30 a.m.—11:00 a.m. Break
11:00 a.m.—Noon Tuesday
Systems Management
Enabling Configuration-Independent Automation by Non-Expert Users
Nate Kushman and Dina Katari, Massachusetts Institute of Technology
Automating Configuration Troubleshooting with Dynamic Information Flow Analysis
Mona Attarian and Jason Finn, University of Michigan
Noon—1:30 p.m. Symposium Luncheon
1:30 p.m.—3:30 p.m. Tuesday
Inside the Data Center, 2
Incremental Processing of Large Data Sets
Daniel Peng and Frank Daikeb, Google, Inc.
Reining in the Outliers in Map-Reduce Clusters
Ganesh Ananthanarayanan, Microsoft and UC Berkeley; Srinath Kundula and Albert Greenberg, Microsoft; Ion Stoica, UC Berkeley; Yi Lu, Microsoft; Bikas Saha, Microsoft Bing
Transactional Consistency and Automatic Management in an Application Data Cache
Dan R.K. Ports, Austin T. Clements, Irene Zhang, Samuel Madden, and Barbara Liskov, MIT CSAIL
Piccolo: Building Fast, Distributed Programs with Partitioned Tables
Russell Power and Jinyang Li, New York University
3:30 p.m.—4:00 p.m. Break
4:00 p.m.—5:30 p.m. Tuesday
Cloud Storage
Depot: Cloud Storage with Minimal Trust
P. Mahajan, S. Setty, S. Lee, A. Seetha, A. Clement, L. Alvisi, M. Dahlin, and M. Wallash, The University of Texas at Austin
Comet: An Active Distributed Key-Value Store
Roxana Geambasu, Amit A. Levy, Tadayoshi Kohno, Arvind Krishnamurthy, and Henry M. Levy, University of Washington
SPORC: Group Collaboration using Untrusted Cloud Resources
Ativel Feldman, William P. Zeller, Michael J. Freedman, and Edward W. Felten, Princeton University
6:00 p.m.—7:30 p.m. Symposium Reception

Wednesday, October 6
9:00 a.m.—10:30 a.m. Tuesday
Production Networks
Onix: A Distributed Control Platform for Large-scale Production Networks
Teenu Koponen, Martin Casado, Natasha Gude, and Jeremy Striling, Nicira Networks; Leon Postevskiy, Min Zhu, and Rajiv Ramanathan, Google; Yucheng Liwata, Hiroaki Inoue, and Takayuki Hama, NEC; Scott Shenker, International Computer Science Institute (ICSI) and UC Berkeley
Can the Production Network Be the Testbed?
Rob Sherwood, Deutsche Telekom Inc. &AB Lab; Glen Gibb, Kok-Kiong Yap, and Guido Appenzeller, Stanford University; Martin Casado, Nicira Networks; Nick McKeown and Guru Parulkar, Stanford University
Building Extensible Networks with Rule-Based Forwarding
Lucian Popa, University of California, Berkeley; Norbert Egi, Lancaster University; Sylvia Ramsamy, Intel Labs; Berkeley; Ion Stoica, University of California, Berkeley
10:30 a.m.—11:00 a.m. Break
11:00 a.m.—Noon Wednesday
Mobility
TaintDroid: An Information-Flow Tracking System for Realtime Privacy Monitoring on Smartphones
William Enck, The Pennsylvania State University; Peter Gilbert, Duke University; Byung-gon Chun, Intel Labs; Landon P. Cox, Duke University; Jyeon Jung, Intel Labs; Patrick McDaniel, The Pennsylvania State University; Aronnel N. Sheth, Intel Labs
StarTrack Next Generation: A Scalable Infrastructure for Track-Based Applications
Maya Haridasa, Iqbal Mahomed, Doug Terry, Chandramohan A. Thekkath, and Li Zhang, Microsoft Research Silicon Valley
Noon—1:00 p.m. Lunch (on your own)
1:00 p.m.—2:30 p.m. Wednesday
Virtualization
The Turtles Project: Design and Implementation of Nested Virtualization
Muli Ben-Yehuda, IBM Research—Haifa; Michael D. Day, IBM Linux Technology Center; Zvi Dubitzky, Michael Factor, Nadav Har’El, and Abdel Gordon, IBM Research—Haifa; Anthony Liguori, IBM Linux Technology Center; Orit Wasserman and Ben-Anni Yassour, IBM Research—Haifa
mClock: Handling Throughput Variability for Hypervisor IO Scheduling
Ajay Gulati, VMware Inc; Arif Merchant, HP Labs; Peter Varman, Rice University
Virtualize Everything but Time
Timothy Broomhead, Laurence Croomen, Julien Ridoux, and Darryl Veitch, Center for Ultra-Broadband Information Networks (CUBIN), The University of Melbourne