

nsdi'09

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6th USENIX Symposium on Networked
Systems Design and Implementation
APRIL 22-24, 2009 • BOSTON, MASSACHUSETTS

USENIX

Join us in Boston, MA, April 22-24, 2009, for NSDI '09, which will focus on the design principles of large-scale networks and distributed systems.

NSDI will bring together researchers from across the networking and systems community in fostering cross-disciplinary approaches and addressing shared research challenges.

Topics for 2009 include: Trust and privacy, storage, content distribution, green networked systems, and more.

Poster session: Submissions are due March 1, 2009. See <http://www.usenix.org/nsdi09/posters> for information on how to submit your work.

Check out these co-located workshops:

- 8th International Workshop on Peer-to-Peer Systems (IPTPS '09), Tuesday, April 21
- 2nd USENIX Workshop on Large-Scale Exploits and Emergent Threats (LEET '09), Tuesday, April 21

<http://www.usenix.org/nsdi09/workshops>

REGISTRATION/HOTEL INFORMATION

Early Bird Registration Deadline: Monday, March 30, 2009

USENIX is pleased to offer an Early Bird Registration Discount of \$150 to those who register for NSDI '09 by Monday, March 30, 2009. After March 30, registration fees increase.

Registration Fees

| | Before March 30 | After March 30 |
|--------------------|-----------------|----------------|
| Technical Sessions | \$740 | \$890 |

If you are *not* a member of USENIX, EurOpen.SE, NUUG, ACM SIGOPS, or ACM SIGCOMM, \$125 will be added to your registration fees.

Registration Fees for Full-Time Students: \$270

This special low registration fee is available at any time.

Students who are *not* members of USENIX: \$50 will be added to your registration fees.

Hotel Information

Hotel Reservation Discount Deadline: March 30, 2009

The Boston Park Plaza Hotel & Towers

Special Attendee Room Rate: \$189 single/double plus 12.45% tax. See <http://www.usenix.org/nsdi09/hotel> for more information.

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Wednesday, April 228:45 a.m.—9:00 a.m. Wednesday**Opening Remarks and Best Paper Awards**Program Co-Chairs: Jennifer Rexford, *Princeton University*; Emin Gün Sirer, *Cornell University*9:00 a.m.—10:30 a.m. Wednesday**Trust and Privacy****TrInc: Small Trusted Hardware for Large Distributed Systems**Dave Levin, *University of Maryland*; John R. Douceur, Jacob R. Lorch, and Thomas Moscibroda, *Microsoft Research***Sybil-Resilient Online Content Rating**Dinh Nguyen Tran, Bonan Min, Jinyang Li, and Lakshminarayanan Subramanian, *New York University***Bunker: A Privacy-Oriented Platform for Network Tracing**Andrew G. Miklas, *University of Toronto*; Stefan Saroiu and Alec Wolman, *Microsoft Research*; Angela Demke Brown, *University of Toronto*10:30 a.m.—11:00 a.m. Break11:00 a.m.—noon Wednesday**Storage****Flexible, Wide-Area Storage for Distributed Systems with WheelFS**Jeremy Stribling, *MIT CSAIL*; Yair Sovran, *New York University*; Irene Zhang and Xavid Pretzer, *MIT CSAIL*; Jinyang Li, *New York University*; Robert Morris and M. Frans Kaashoek, *MIT CSAIL***PADS: A Policy Architecture for Building Data Storage Systems**Nalini Belaramani, *The University of Texas at Austin*; Jiandan Zheng, *Amazon.com Inc.*; Amol Nayate, *IBM T.J. Watson Research Center*; Robert Soule, *New York University*; Mike Dahlin, *The University of Texas at Austin*; Robert Grimm, *New York University*Noon—1:30 p.m. Lunch (on your own)1:30 p.m.—2:30 p.m. Wednesday**Wireless #1: Software Radios****Sora: High Performance Software Radio Using General Purpose Multi-core Processors**Kun Tan, Jiansong Zhang, and Haitao Wu, *Microsoft Research Asia*; Fang Ji, *Beijing Jiao Tong University*; He Liu, Yusheng Ye, and Shen Wang, *Tsinghua University*; Yongguang Zhang and Wei Wang, *Microsoft Research Asia*; Geoffrey M. Voelker, *University of California, San Diego***Enabling MAC Protocol Implementations on Software-defined Radios**George Nychis, Srinivasan Seshan, Peter Steenkiste, Thibaud Hottelier, and Zhuocheng Yang, *Carnegie Mellon University*2:30 p.m.—3:00 p.m. Break3:00 p.m.—4:30 p.m. Wednesday**Content Distribution****AntFarm: Efficient Content Distribution with Managed Swarms**Ryan S. Peterson and Emin Gün Sirer, *Cornell University***HashCache: Cache Storage for the Next Billion**Anirudh Badam, Kyoungsoo Park, Vivek S. Pai, and Larry L. Peterson, *Princeton University***iPlane Nano: Path Prediction for Peer-to-Peer Applications**Harsha V. Madhyastha, *University of California, San Diego*; Ethan Katz-Bassett, Thomas Anderson, and Arvind Krishnamurthy, *University of Washington*; Arun Venkataramani, *University of Massachusetts Amherst*4:30 p.m.—5:30 p.m. Wednesday**BFT****Making Byzantine Fault Tolerant Systems Tolerate Byzantine Faults**Lorenzo Alvisi, Allen Clement, and Mike Dahlin, *The University of Texas at Austin*; Mirco Marchetti, *University of Modena and Reggio Emilia*; Edmund Wong, *The University of Texas at Austin***Zeno: Eventually Consistent Byzantine Fault Tolerance**Atul Singh, *MPI-SWS and Rice University*; Pedro Fonseca, Petr Kuznetsov, and Rodrigo Rodrigues, *MPI-SWS*; Petros Maniatis, *Intel Research Berkeley*6:00 p.m.—8:00 p.m. Wednesday**Reception and Poster Session**The poster session will allow researchers to present recent and on-going projects. See www.usenix.org/nsdi09/posters for details.**Thursday, April 23**8:30 a.m.—10:30 a.m. Thursday**Evaluation/Correctness****SPLAY: Distributed Systems Evaluation Made Simple (or How to Turn Ideas into Live Systems in a Breeze)**Lorenzo Leonini, Étienne Rivière, and Pascal Felber, *University of Neuchâtel, Switzerland***Modeling and Emulation of Internet Paths**Pramod Sanaga, Jonathon Duerig, Robert Ricci, and Jay Lepreau, *University of Utah***MODIST: Transparent Model Checking of Unmodified Distributed Systems**Junfeng Yang, *Columbia University*; Tisheng Chen, Ming Wu, Zhilei Xu, Xuezheng Liu, Haoxiang Lin, Mao Yang, and Fan Long, *Microsoft Research Asia*; Lintao Zhang and Lidong Zhou, *Microsoft Research Silicon Valley***CrystalBall: Predicting and Preventing Inconsistencies in Deployed Distributed Systems**Maysam Yabandeh, Nikola Knežević, Dejan Kostić, and Viktor Kuncak, *EPFL*10:30 a.m.—11:00 a.m. Break11:00 a.m.—12:30 p.m. Thursday**Wide-Area Services and Replication****Tolerating Latency in Replicated State Machines Through Client Speculation**Benjamin Wester, *University of Michigan*; James Cowling, *MIT CSAIL*; Edmund B. Nightingale, *Microsoft Research*; Peter M. Chen and Jason Flinn, *University of Michigan*; Barbara Liskov, *MIT CSAIL***Cimbiosys: A Platform for Content-based Partial Replication**Venugopalan Ramasubramanian, Thomas L. Rodeheffer, and Douglas B. Terry, *Microsoft Research*; Meg Walraed-Sullivan, *University of California, San Diego*; Ted Wobber and Cathy Marshall, *Microsoft Research*; Amin Vahdat, *University of California, San Diego***RPC Chains: Efficient Client-Server Communication in Geodistributed Systems**Yee Jiun Song, Marcos K. Aguilera, Rama Kotla, and Dahlia Malkhi, *Microsoft Research Silicon Valley*12:30 p.m.—2:00 p.m. Symposium Luncheon2:00 p.m.—3:30 p.m. Thursday**Botnets****Studying Spamming Botnets Using Botlab**John P. John, Alexander Moshchuk, Steven D. Gribble, and Arvind Krishnamurthy, *University of Washington***Not-a-Bot: Improving Service Availability in the Face of Botnet Attacks**Ramakrishna Gummadi and Hari Balakrishnan, *MIT CSAIL*; Petros Maniatis and Sylvia Ratnasamy, *Intel Research Berkeley***BotGraph: Large Scale Spamming Botnet Detection**Yao Zhao, *Northwestern University*; Yinglian Xie, Fang Yu, Qifa Ke, and Yuan Yu, *Microsoft Research Silicon Valley*; Yan Chen, *Northwestern University*; Eliot Gillum, *Microsoft Corporation*3:30 p.m.—4:00 p.m. Break4:00 p.m.—5:00 p.m. Thursday**Network Management****Unraveling the Complexity of Network Management**Theophilus Benson and Aditya Akella, *University of Wisconsin, Madison*; Dave Maltz, *Microsoft Research***NetPrints: Diagnosing Home Network Misconfigurations Using Shared Knowledge**Bhavish Aggarwal, Ranjita Bhagwan, and Tathagata Das, *Microsoft Research India*; Siddharth Eswaran, *IIT Delhi*; Venkata N. Padmanabhan, *Microsoft Research India*; Geoffrey M. Voelker, *University of California, San Diego*5:00 p.m.—6:00 p.m. Thursday**Green Networked Systems****Somniloquy: Augmenting Network Interfaces to Reduce PC Energy Usage**Yuvraj Agarwal, *University of California, San Diego*; Ranveer Chandra, Steve Hodges, James Scott, and Paramvir Bahl, *Microsoft Research*; Rajesh Gupta, *University of California, San Diego***Skilled in the Art of Being Idle: Reducing Energy Waste in Networked Systems**Sergiu Nedevschi, *International Computer Science Institute*; Sylvia Ratnasamy, *Intel Research Berkeley*; Jaideep Chandrashekar, *Intel Research Santa Clara*; Bruce Nordman, *Lawrence Berkeley National Laboratory*; Nina Taft, *Intel Research Berkeley***Friday, April 24**9:00 a.m.—10:30 a.m. Friday**Wireless #2: Programming and Transport****Wishbone: Profile-based Partitioning for Sensor-net Applications**Ryan Newton, Sivan Toledo, Lewis Girod, Hari Balakrishnan, and Samuel Madden, *MIT CSAIL***Softspeak: Making VoIP Play Well in Existing 802.11 Deployments**Patrick Verkaik, Yuvraj Agarwal, Rajesh Gupta, and Alex C. Snoeren, *University of California, San Diego***Block-switched Networks: A New Paradigm for Wireless Transport**Ming Li, Devesh Agrawal, Deepak Ganesan, Arun Venkataramani, and Himanshu Agrawal, *University of Massachusetts Amherst*10:30 a.m.—11:00 a.m. Break11:00 a.m.—12:30 p.m. Friday**Routing****NetReview: Detecting When Interdomain Routing Goes Wrong**Andreas Haeberlen, *MPI-SWS*; Ioannis Avramopoulos, *Deutsche Telekom Laboratories*; Jennifer Rexford, *Princeton University*; Peter Druschel, *MPI-SWS***Making Routers Last Longer with ViAggre**Hitesh Ballani, Paul Francis, and Tuan Cao, *Cornell University*; Jia Wang, *AT&T Labs—Research***Symbiotic Relationships in Internet Routing Overlays**Cristian Lumezanu, Randolph Baden, Dave Levin, Neil Spring, and Bobby Bhattacharjee, *University of Maryland*