

# NSDI '17: 14th USENIX Symposium on Networked Systems Design and Implementation

March 27–29, 2017 • Boston, MA



Sponsored by USENIX, the Advanced Computing Systems Association, in cooperation with ACM SIGCOMM and ACM SIGOPS

## Important Dates

- Paper titles and abstracts due: **Wednesday, September 14, 2016, 3:00 p.m. US PDT**
- Full paper submissions due: **Wednesday, September 21, 2016, 3:00 p.m. US PDT**
- Notification to authors: **Monday, December 5, 2016**
- Final paper files due: **Thursday, February 23, 2017**

## Symposium Organizers

### Program Co-Chairs

Aditya Akella, *University of Wisconsin–Madison*  
Jon Howell, *Google*

### Program Committee

Sharad Agarwal, *Microsoft*  
Tom Anderson, *University of Washington*  
Andrea Arpaci-Dusseau, *University of Wisconsin—Madison*  
Anirudh Badam, *Microsoft*  
Mahesh Balakrishnan, *Yale University*  
Fabian Bustamante, *Northwestern University*  
Ranveer Chandra, *Microsoft*  
David Choffnes, *Northeastern University*  
Romit Roy Choudhury, *University of Illinois at Urbana–Champaign*  
Mosharaf Chowdhury, *University of Michigan*  
Mike Dahlin, *Google*  
Anja Feldmann, *Technische Universität Berlin*  
Rodrigo Fonseca, *Brown University*  
Nate Foster, *Cornell University*  
Deepak Ganesan, *University of Massachusetts Amherst*  
Phillipa Gill, *Stony Brook University*  
Srikanth Kandula, *Microsoft*  
Teemu Koponen, *Styra*  
Sanjeev Kumar, *Uber*  
Swarun Kumar, *Carnegie Mellon University*  
Wyatt Lloyd, *University of Southern California*  
Boon Thau Loo, *University of Pennsylvania*  
Jacob Lorch, *Microsoft*  
Ratul Mahajan, *Microsoft*

Dahlia Malkhi, *VMware*  
Dave Maltz, *Microsoft*  
Z. Morley Mao, *University of Michigan*  
Michael Mitzenmacher, *Harvard University*  
Jason Nieh, *Columbia University*  
George Porter, *University of California, San Diego*  
Luigi Rizzo, *University of Pisa*  
Sriini Seshan, *Carnegie Mellon University*  
Anees Shaikh, *Google*  
Ankit Singla, *ETH Zürich*  
Robbert van Renesse, *Cornell University*  
Geoff Voelker, *University of California, San Diego*  
David Wetherall, *Google*  
Adam Wierman, *California Institute of Technology*  
John Wilkes, *Google*  
Minlan Yu, *University of Southern California*  
Heather Zheng, *University of California, Santa Barbara*  
Lin Zhong, *Rice University*

### Steering Committee

Katerina Argyraki, *EPFL*  
Paul Barham, *Google*  
Nick Feamster, *Georgia Institute of Technology*  
Casey Henderson, *USENIX Association*  
Arvind Krishnamurthy, *University of Washington*  
Jeff Mogul, *Google*  
Brian Noble, *University of Michigan*  
Timothy Roscoe, *ETH Zürich*  
Alex C. Snoeren, *University of California, San Diego*

### Overview

NSDI focuses on the design principles, implementation, and practical evaluation of networked and distributed systems. Our goal is to bring together researchers from across the networking and systems community to foster a broad approach to addressing overlapping research challenges.

NSDI provides a high-quality, single-track forum for presenting results and discussing ideas that further the knowledge and understanding of the networked systems community as a whole, continue a significant research dialog, or push the architectural boundaries of network services.



## Topics

We solicit papers describing original and previously unpublished research. Specific topics of interest include but are not limited to:

- Highly available and reliable networked systems
- Security and privacy of networked systems
- Distributed storage, caching, and query processing
- Energy-efficient computing in networked systems
- Cloud/multi-tenant systems
- Mobile and embedded/sensor applications and systems
- Wireless networked systems
- Network measurements, workload, and topology characterization systems
- Self-organizing, autonomous, and federated networked systems
- Managing, debugging, and diagnosing problems in networked systems
- Virtualization and resource management for networked systems and clusters
- Systems aspects of networking hardware
- Experience with deployed/operational networked systems
- Communication and computing over big data on a networked system
- Practical aspects of network economics
- An innovative solution for a significant problem involving networked systems

## Operational Systems Track

In addition to papers that describe original research, NSDI '17 also solicits papers that describe the design, implementation, analysis, and experience with large-scale, operational systems and networks. We encourage submission of papers that disprove or strengthen existing assumptions, deepen the understanding of existing problems, and validate known techniques at scales or environments in which they were never used or tested before. Such operational papers need not present new ideas or results to be accepted.

Authors should indicate on the title page of the paper and in the submission form that they are submitting to this track.

## What to Submit

NSDI '17 is **double-blind**, meaning that authors should make a good faith effort to anonymize papers. This is new for NSDI in 2017. As an author, you should not identify yourself in the paper either explicitly or by implication (e.g., through the references or acknowledgments). However, only non-destructive anonymization is required. For example, system names may be left un-anonymized, if the system name is important for a reviewer to be able to evaluate the work. For example, a paper on experiences with the design of .NET should not be re-written to be about "an anonymous but widely used commercial distributed systems platform."

Additionally, please take the following steps when preparing your submission:

- Remove authors' names and affiliations from the title page.
- Remove acknowledgment of identifying names and funding sources.
- Use care in naming your files. Source file names, e.g., Joe.Smith.dvi, are often embedded in the final output as readily accessible comments.
- Use care in referring to related work, particularly your own. Do not omit references to provide anonymity, as this leaves the reviewer unable to grasp the context. Instead, a good solution is to reference your past work in the third person, just as you would any other piece of related work.

- If you need to reference another submission at NSDI '17 on a related topic, reference it as follows: "A related paper describes the design and implementation of our compiler [Anonymous 2017]." with the corresponding citation: "[Anonymous 2017] Under submission. Details omitted for double-blind reviewing."
- Work that extends an author's previous workshop paper is welcome, but authors should (a) acknowledge their own previous workshop publications with an anonymous citation and (b) explain the differences between the NSDI submission and the prior workshop paper.
- If you cite anonymous work, you must also send the deanonymized reference(s) to the PC chair in a separate email.
- Blinding is intended to not be a great burden. If blinding your paper seems too burdensome, please contact the program co-chairs and discuss your specific situation.

Submissions must be no longer than 12 pages, including footnotes, figures, and tables. Submissions may include as many additional pages as needed for references and for supplementary material in appendices. The paper should stand alone without the supplementary material, but authors may use this space for content that may be of interest to some readers but is peripheral to the main technical contributions of the paper. Note that members of the program committee are free to not read this material when reviewing the paper.

Submissions must be in two-column format, using 10-point type on 12-point (single-spaced) leading, with a maximum text block of 6.5" wide x 9" deep, with .25" inter-column space, formatted for 8.5" x 11" paper. Papers not meeting these criteria will be rejected without review, and no deadline extensions will be granted for reformatting. Pages should be numbered, and figures and tables should be legible when printed without requiring magnification. Authors may use color in their figures, but the figures should be readable when printed in black and white. All papers must be submitted via the Web submission form linked from the Call for Papers Web site, [www.usenix.org/nsdi17/cfp](http://www.usenix.org/nsdi17/cfp).

Submissions will be judged on originality, significance, interest, clarity, relevance, and correctness.

## Policies

Simultaneous submission of the same work to multiple venues, submission of previously published work, or plagiarism constitutes dishonesty or fraud. USENIX, like other scientific and technical conferences and journals, prohibits these practices and may take action against authors who have committed them. See the USENIX Conference Submissions Policy at [www.usenix.org/conferences/submissions-policy](http://www.usenix.org/conferences/submissions-policy) for details.

Previous publication at a workshop is acceptable as long as the NSDI submission includes substantial new material. See remarks above about how to cite and contrast with a workshop paper.

Authors uncertain whether their submission meets USENIX's guidelines should contact the Program Co-Chairs, [nsdi17chairs@usenix.org](mailto:nsdi17chairs@usenix.org).

Papers accompanied by nondisclosure agreement forms will not be considered. All submissions will be treated as confidential prior to publication on the USENIX NSDI '17 web site; rejected submissions will be permanently treated as confidential.

## Ethical Considerations

Papers describing experiments with users or user data (e.g., network traffic, passwords, social network information), should follow the basic principles of ethical research, e.g., beneficence (maximizing the benefits to an individual or to society while minimizing harm to the individual), minimal risk (appropriateness of the risk versus benefit ratio), voluntary consent, respect for privacy, and limited deception. When appropriate, authors are encouraged to include a subsection describing these issues. Authors may want to consult the Menlo Report at [www.caida.org/publications/papers/2012/menlo\\_report\\_actual\\_formatted/](http://www.caida.org/publications/papers/2012/menlo_report_actual_formatted/) for further information on ethical principles, or the Allman/Paxson IMC '07 paper at

conferences.sigcomm.org/imc/2007/papers/imc76.pdf for guidance on ethical data sharing.

Authors must, as part of the submission process, attest that their work complies with all applicable ethical standards of their home institution(s), including, but not limited to privacy policies and policies on experiments involving humans. Note that submitting research for approval by one's institution's ethics review body is necessary, but not sufficient—in cases where the PC has concerns about the ethics of the work in a submission, the PC will have its own discussion of the ethics of that work. The PC's review process may examine the ethical soundness of the paper just as it examines the technical soundness.

### **Processes for Accepted Papers**

If your paper is accepted and you need an invitation letter to apply for a visa to attend the conference, please contact [conference@usenix.org](mailto:conference@usenix.org) as soon as possible. (Visa applications can take at least 30 working days to process.) Please identify yourself as a presenter and include your mailing address in your email.

Accepted papers may be shepherded through an editorial review process by a member of the Program Committee. Based on initial feedback from the Program Committee, authors of shepherded papers will submit an editorial revision of their paper to their Program Committee shepherd. The shepherd will review the paper and give the author additional comments. All authors, shepherded or not, will upload their final file to the submissions system by the camera ready date for the conference Proceedings.

All papers will be available online to registered attendees before the conference. If your accepted paper should not be published prior to the event, please notify [production@usenix.org](mailto:production@usenix.org). The papers will be available online to everyone beginning on the first day of the conference.

### **Best Paper Awards**

Awards will be given for the best paper(s) at the conference.

### **Community Award**

To encourage broader code and data sharing within the NSDI community, the conference will also present a "Community Award" for the best paper whose code and/or data set is made publicly available by the final papers deadline, February 23, 2017. Authors who would like their paper to be considered for this award will have the opportunity to tag their paper during the submission process.