2018 USENIX Annual Technical Conference
July 11–13, 2018 • Boston, MA, USA

Sponsored by USENIX, the Advanced Computing Systems Association

Important Dates
• Paper titles and abstracts due: Tuesday, January 30, 2018
• Complete paper submissions due: Tuesday, February 6, 2018
• Notification to authors: Wednesday, April 18, 2018
• Final papers due: Thursday, May 31, 2018

Conference Organizers

Program Co-Chairs
Haryadi Gunawi, University of Chicago
Benjamin Reed, Facebook

Program Committee
Rachit Agarwal, Cornell University
Irfan Ahmad, CachePhysics
Deniz Altnbuken, Google
Mahesh Balakrishnan, Yale University and Facebook
Aruna Balasubramaniam, Stony Brook University
Theophilus Benson, Brown University
John Bent, Cray Inc.
Dhruba Borthakur, Rockset Inc.
Nathan Bronson, Facebook
Irina Calciu, VMware Research
Michael Carbin, MIT
Vijay Chidambaram, University of Texas at Austin
David Chu, Google
Paolo Costa, Microsoft Research
Peter Desnoyers, Northeastern University
Yufei Ding, University of California, Santa Barbara
Lakshmi Ganesh, Facebook
Ada Gavrilovska, Georgia Institute of Technology
Phillipa Gill, University of Massachusetts, Amherst
XiaoHui (Helen) Gu, North Carolina State University
Indranil Gupta, University of Illinois at Urbana-Champaign
Dean Hildebrand, Google
Yu Hua, Huazhong University of Science and Technology
H. Howie Huang, George Washington University
Jian Huang, University of Illinois at Urbana-Champaign
Ryan Huang, Johns Hopkins University
David Irwin, University of Massachusetts, Amherst
Jun Chen Jiang, University of Chicago and Microsoft Research
Flavio Junqueira, Confluent

Asim Kadav, NEC Labs
Konstantinos Karanasos, Microsoft
Samira Khan, University of Virginia
Taesoo Kim, Georgia Institute of Technology
Achmad Kistijantoro, Institut Teknologi Bandung
Julia Lawall, Inria/LIP6
I-Ting Angelina Lee, Washington University in St. Louis
Tanakorn Leesatapornwongsa, Samsung Research America
Cheng Li, VMware
Jinyang Li, New York University
Xing Lin, NetApp
Xiaosong Ma, Qatar Computing Research Institute, HKBU, Qatar
Dhalia Malkhi, VMware Research
Carlos Maltzahn, University of California, Santa Cruz
Changwoo Min, Virginia Tech
Iqbal Mohamed, Samsung Research America
Cristina Nita-Rotaru, Northeastern University
Vijayan Prabhakaran, Amazon
Christopher J. Rossbach, University of Texas at Austin and VMware Research
Russell Sears, Pure Storage
Siddhartha Sen, Microsoft Research
Haiying Shen, University of Virginia
Alex Shraer, Apple
Keith A. Smith, NetApp
Brent Stephens, University of Wisconsin-Madison
Christopher Stewart, Ohio State University
Patrick Stuedi, IBM Research
Swaminathan Sundararaman, ParallelM
Lalith Suresh, VMware Research
Bhuvan Urgaonkar, Pennsylvania State University
Peter Varman, Rice University
Shivaram Venkataraman, University of Wisconsin-Madison and Microsoft Research
Andrew Wang, Cloudera
Youjip Won, Hanyang University
Gala Yadgar, Technion Israel Institute of Technology
Antonia Zhai, University of Minnesota
Irene Zhang, Microsoft Research
Yiyieng Zhang, Purdue University
Zheng (Eddy) Zhang, Rutgers University
Overview
Authors are invited to submit original and innovative papers to the
Refereed Papers Track of the 2018 USENIX Annual Technical Conference. We seek high-quality submissions that further the knowledge and understanding of modern computing systems with an emphasis on implementations and experimental results. We encourage papers that break new ground, present insightful results based on practical experience with computer systems, or are important, independent reproductions/refutations of the experimental results of prior work.

USENIX ATC’18 has a broad scope, and specific areas of interest include (but are not limited to):

- Architectural interaction
- Big data infrastructure
- Cloud and edge computing
- Distributed and parallel systems
- Embedded systems
- Energy/power management
- File and storage systems
- Internet of Things
- Machine learning and systems interactions
- Mobile and wireless
- Networking (WAN, LAN, and datacenter) and network services
- Operating systems
- Reliability, availability, and scalability
- Security, privacy, and trust
- System and network management and troubleshooting
- Usage studies and workload characterization
- Virtualization

USENIX ATC’18 is especially interested in papers broadly focusing on practical techniques for building better software systems: ideas or approaches that provide practical solutions to significant issues facing practitioners. This includes all aspects of system development: techniques for developing systems software; analyzing programs and finding bugs; making systems more efficient, secure, and reliable; and deploying systems and auditing their security.

Reports of deployment experience and operations-oriented studies, as well as other work that studies software artifacts, introduces new data sets of practical interest, or impacts the implementation of software components in areas of active interest to the community are well-suited for the conference.

The conference seeks both long-format papers consisting of 11 pages and short-format papers of 5 pages, including footnotes, appendices, figures, and tables, but not including references. Short papers will be included in the proceedings and will be presented as normal but in sessions with slightly shorter time limits.

Best Paper Awards
Cash prizes will be awarded to the best papers at the conference. Please see the USENIX proceedings library for Best Paper winners from previous years at www.usenix.org/conferences/best-papers.

Best of the Rest Track
The USENIX Annual Technical Conference is the senior USENIX forum covering the full range of technical research in systems software. Over the past two decades, USENIX has added a range of more specialized conferences. ATC is proud of the content being published by its sibling USENIX conferences and will be bringing a track of encore presentations to ATC ’18. This “Best of the Rest” track will allow attendees to sample the full range of systems software research in one forum, offering both novel ATC presentations and encore presentations from recent offerings of ATC’s sibling conferences.

What to Submit
Authors are required to submit full papers by the paper submission deadline. It is a hard deadline; no extensions will be given. All submissions for USENIX ATC’18 will be electronic, in PDF format, via the web submission form on the Call for Papers website, www.usenix.org/act18/cfp.

USENIX ATC’18 will accept two types of papers:

**Full papers:** Submitted papers must be no longer than 11 single-spaced 8.5” x 11” pages, including figures and tables, but not including references. You may include any number of pages for references. Papers should be formatted in 2 columns, using 10-point type on 12-point leading, in a 6.5” x 9” text block. Figures and tables must be large enough to be legible when printed on 8.5” x 11” paper. Color may be used, but the paper should remain readable when printed in monochrome. The first page of the paper should include the paper title and author name(s); reviewing is single blind. Papers longer than 11 pages including appendices, but excluding references, or violating formatting specifications will not be reviewed. In a good paper, the authors will have:

- Addressed a significant problem
- Devised an interesting and practical solution or provided an important, independent, and experimental reproduction/refutation of prior solutions
- Clearly described what they have and have not implemented
- Demonstrated the benefits of their solution
- Articulated the advances beyond previous work
- Drawn appropriate conclusions

**Short papers:** Authors with a contribution for which a full paper is not appropriate may submit short papers of at most 5 pages, not including references, with the same formatting guidelines as full papers. You may include any number of pages for references. Examples of short paper contributions include:

- Original or unconventional ideas at a preliminary stage of development
- The presentation of interesting results that do not require a full-length paper, such as negative results or experimental validation
- Advocacy of a controversial position or fresh approach

For more details on the submission process and for templates to use with LaTeX and Word, authors should consult the detailed submission requirements at www.usenix.org/conference/act18/requirements-authors. Specific questions about submissions may be sent to the program co-chairs, act18chairs@usenix.org.

By default, all papers will be made 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. In any case, the papers will be available online to everyone beginning on the first day of the conference, July 11, 2018.

Papers accepted by nondisclosure agreement forms will not be considered. Accepted submissions will be treated as confidential prior to publication on the USENIX ATC ’18 website; rejected submissions will be permanently treated as confidential.

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 for details.

Note that the above does not preclude the submission of a regular full paper that overlaps with a previous short paper or workshop paper. However, any submission that derives from an earlier paper must provide a significant new contribution (for example, by providing a more complete evaluation), and must explicitly mention the contributions of the submission over the earlier paper. If you have questions, contact your program co-chairs, act18chairs@usenix.org, or the USENIX office, submissionspolicy@usenix.org.
Authors will be notified of paper acceptance or rejection by April 21, 2018. Acceptance will typically be conditional, subject to shepherding by a program committee member.

**Poster Session**

The poster session is an excellent forum to discuss ideas and get useful feedback from the community. Posters and demos for the poster session will be selected from all the full paper and short paper submissions by the poster session chair. If you do not want your submissions to be considered for the poster session, please specify on the submission website.

**Program and Registration Information**

Complete program and registration information will be available in April 2018 on the conference website.