



Association for  
Computing Machinery

*Advancing Computing as a Science & Profession*

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**ACM SIGCOMM 2017 to Showcase Exciting Developments in Computer Networking**

**Recent Advances in Programmable Networking Technologies and New Developments in Data Center Design among Research Findings to Be Presented**

**August 9, 2017, New York** – The Association for Computing Machinery’s (ACM) Special Interest Group on Data Communication (SIGCOMM) today announced highlights of SIGCOMM 2017, its annual flagship conference to be held at the University of California, Los Angeles (UCLA) August 21 – 25, 2017. The five-day conference will bring together scholars, practitioners, and students from around the world to discuss the latest in in the field of communications and computer networks.

Communication networks and their underlying infrastructure continue to evolve with the rise of the information economy, bringing new challenges as well as new avenues for development. In addition to the main conference, SIGCOMM 2017 will also feature nine workshops and eight tutorials on the latest advances in communication networks, including kernel-bypass networks; Big Data analytics and machine learning; networking and programming languages; and virtual/augmented reality, among others.

“As communication over the internet becomes ubiquitous, innovations in the communications infrastructure are driving faster speeds, lower latency, and new services, as well improved reliability and security,” said SIGCOMM 2017 General Co-chair K.K. Ramakrishnan of the University of California, Riverside. “At SIGCOMM 2017, we look forward to showcasing innovative research related to technical design and engineering, regulation, operations and the social implications of computer networking.”

Conference organizers accept research submissions on areas ranging from network architecture and design to analysis, measurement and simulation. “On average, 30-50 papers are selected for presentation at SIGCOMM from the hundreds of papers that are submitted,” added General Co-chair Lixia Zhang. “The recent growth of the conference and the competitive nature of the selection process mean that attendees have the opportunity to access the most current and ground-breaking research in the field.”

**2017 ACM SIGCOMM Highlights**

The main conference will open on Tuesday, August 22 with a keynote address by the 2017 SIGCOMM Award recipient, Raj Jain (Washington University, St. Louis). The annual award recognizes lifetime contributions to the field of communication networks and was awarded to Jain "for life-long contributions to computer networking including traffic management, congestion control, and performance analysis."

As a SIGCOMM first, on Wednesday, August 23, the conference will also feature a keynote talk by Jennifer Rexford (Princeton University), the winner of the 2016 ACM Athena Lecturer Award. This ACM award celebrates women researchers who have made fundamental contributions to computer science and was awarded last year to Rexford "for innovations that improved the efficiency of the Border Gateway Protocol (BGP) in routing Internet traffic, for laying the groundwork for software-defined networks (SDNs), and for contributions in measuring and engineering IP networks."

Other awards that will be presented during SIGCOMM 2017 include the Test of Time Paper Award and the Doctoral Dissertation Award. The Test of Time award recognizes a paper published 10 to 12 years in the past in *Computer Communication Review* or any SIGCOMM-sponsored or co-sponsored conference that is deemed to be an outstanding paper whose contents are still a vibrant and useful contribution today.

The recipients of the 2017 SIGCOMM Test of Time Paper Award are "Ethane: Taking Control of the Enterprise" by Martin Casado, Michael J. Freedman, Justin Pettit, Jianying Luo, Nick McKeown, Scott Shenker (SIGCOMM 2007) and "Measurement and Analysis of Online Social Networks," by Alan Mislove, Massimiliano Marcon, Krishna P. Gummadi, Peter Druschel, and Bobby Bhattacharjee (IMC 2007).

The Doctoral Dissertation Award recognizes excellent thesis research by doctoral candidates in the field of computer networking and data communication. The 2016 award winners are Justine Sherry for her dissertation "Middleboxes as a Cloud Service" and Vamsi Talla for his dissertation "Power Communication and Sensing Solutions for Energy Constrained Platforms."

In addition to the two keynote talks, the main conference will feature 11 technical sessions that showcase the research findings described in the 36 accepted papers (out of 250 submissions). Among the topics covered by these technical sessions are programmable devices, network function virtualization, network monitoring, network verification, protocol design, data centers, wireless communication, internet peering, and internet routing. Rounding out the technical program are a session highlighting the "Best of CCR," (CCR is the ACM SIGCOMM newsletter), poster and demo sessions, and topic preview sessions.

### **Workshops and Tutorials**

SIGCOMM 2017 also features nine full-day workshops and three full-day and five half-day tutorials. The workshops cover the following topics:

- Mobile edge communication
- Kernel-bypass networks
- Big Data analytics and machine learning
- Internet Quality-of-Experience
- Networking and programming languages
- Container networking
- Mobility in the evolving Internet architecture
- Virtual reality and augmented reality networks
- Reproducibility

The tutorials introduce participants to topics such as:

- Millimeter-wave wireless networking and sensing
- Named data networking
- Adaptive streaming
- P4 -> NetFPGA
- Programming the data plane
- Understanding latency
- The Netmap framework for NFV applications
- Low latency communication for connected cars

Additional information about SIGCOMM 2017, including a full program and schedule of events, may be found at <http://conferences.sigcomm.org/sigcomm/2017/>.

#### **About SIGCOMM**

SIGCOMM (<http://www.sigcomm.org/>) is ACM's professional forum for the discussion of topics in the field of communications and computer networks, including technical design and engineering, regulation and operations, and the social implications of computer networking. The SIG's members are particularly interested in the systems engineering and architectural questions of communication.

#### **About ACM**

ACM, the Association for Computing Machinery ([www.acm.org](http://www.acm.org)), is the world's largest educational and scientific computing society, uniting computing educators, researchers and professionals to inspire dialogue, share resources and address the field's challenges. ACM strengthens the computing profession's collective voice through strong leadership, promotion of the highest standards, and recognition of technical excellence. ACM supports the professional growth of its members by providing opportunities for life-long learning, career development, and professional networking.

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