



Association for  
Computing Machinery

*Advancing Computing as a Science & Profession*



**CONTACT:** Jim Ormond  
212-626-0505  
[ormond@hq.acm.org](mailto:ormond@hq.acm.org)

**Mobile Devices for Vehicle Safety, Virtual Reality, and Wearable Computers  
Among the Exciting Innovations to Be Featured at MobiCom 2017**

*Latest Innovations in Mobile Computing and Wireless Networking Take Center Stage  
at Annual ACM Conference*

**NEW YORK, September 28, 2017** – The Association for Computing Machinery’s (ACM) Special Interest Group on Mobility of Systems (SIGMOBILE) is pleased to announce that [MobiCom 2017](#), the international conference on mobile computing and networking, will be held October 16-20, 2017 at Snowbird ski resort near Salt Lake City, UT. Now in its 23<sup>rd</sup> year, MobiCom serves as the premier international forum addressing networks, systems, algorithms, and the applications that support mobile computing and wireless networks.

"Mobile computing and networking are an integral and inseparable part of our everyday lives," said Mobicom 2017 General Chair Kobus Van der Merwe, University of Utah. "From mobile browsing to GPS, there is little our mobile devices can't do. At the same time, the ubiquity and growth of mobile has created an ever-evolving and unique set of challenges. Our goal with MobiCom is to bring together researchers, academics, practitioners and students for leading-edge presentations, workshops and demonstrations that will drive future innovation in the field."

Technical Program Co-chair Ben Greenstein of Google touted the diverse range of technologies that will be showcased at this year's conference. "MobiCom's technical program presents major advances in all things mobile and wireless, including everything from cardiac-based authentication to new ways to communicate with magnetic signals and lights," said Greenstein. "The program includes exciting new technologies such as RFID that can recognize gestures and ID materials, smart lights that prevent unwanted photos, WiFi that can talk to ZigBee, immersive VR (on a phone!), low-power mobile gaming, full-duplex wireless routers, automatic cellular diagnostics, new sensors and tags for accurate indoor localization, and much, much more."

**2017 MobiCom Highlights**

**Keynote Presentation: Tuesday, October 17**  
***Making Roads Safer by Making Drivers Better***

### **Hari Balakrishnan, MIT and Cambridge Mobile Telematics**

Each year more than 50 million people are injured, and 1.25 million killed, in car accidents around the world. This talk will describe how mobile sensing (especially using smartphones), signal processing, machine learning, and behavioral science can improve road safety by making people better drivers. It will address the challenges in achieving this goal, as well as learnings from successful deployments in multiple countries.

### **Keynote Presentation: Thursday, October 19**

#### ***Spurring Mobile Systems Research into the Next Decade***

#### **Thyaga Nandagopal, National Science Foundation**

Wireless and mobile systems are becoming a ubiquitous part of everyday life. Some of the most common systems have become commoditized, enabling higher-layer application-driven research while at the same time inhibiting lower-layer research. On the other hand, new frontiers of wireless communications are opening up in various spectrum bands hitherto not used for wireless data communications. This talk will cover the future of wireless systems-driven research and contributions to science & technology from the vantage point of the National Science Foundation.

### **SIGMOBILE Rockstar Award Presentation: Wednesday, October 18**

#### ***Navigating the Chasm Between Curiosity and Impact-Driven Research***

#### **Shyam Gollakota, University of Washington**

Being in academia provides a unique opportunity to explore one's curiosity and build systems that advance human understanding of engineering and science. System researchers, however, also have a responsibility to build systems that can impact practice in the near-term and perhaps, even create brand new industries. This talk will focus on Shyam's efforts navigating the chasm between curiosity and impact-driven research. Specifically, he will share two research themes he has been working on as an assistant professor at UW CSE, where what initially began as curiosity-driven projects were transformed by the urge to make immediate practical impact.

### **Research Paper Highlights**

- NICScatter: Backscatter as a Covert Channel in Mobile Devices
- WEBe: Physical-Layer Cross-Technology Communication via Emulation Continuous Authentication for Voice Assistants
- NutShell: Scalable Whittled Proxy Execution for Low-Latency Web over Cellular Networks
- RF-Echo: A Non-Line-of-Sight Indoor Localization System Using a Low-Power Active RF Reflector ASIC Tag
- Adding the Next Nine: An Investigation of Mobile Broadband Networks Availability

### **Conference Workshops**

- [Hot Topics in Wireless \(HotWireless 2017\)](#)
- [Experiences with the Design and Implementation of Smart Objects](#)
- [Visible Light Communication Systems \(VLCS 2017\)](#)
- [Millimeter-Wave Networks and Sensing Systems 2017 \(mmNets 2017\)](#)

- [Challenged Networks \(CHANTS 2017\)](#)
- [Wireless of the Students, by the Students, and for the Students \(S3\) Workshop](#)
- [International Workshop on Smart, Autonomous, and Connected Vehicular Systems and Services \(CarSys 2017\)](#)
- [Wireless Network Testbeds, Experimental evaluation & CHaracterization \(WiNTECH 2017\)](#)

### **App Contest**

MobiCom 2017 is also pleased to announce the return of the 5<sup>th</sup> Mobile Application Competition. The competition is a platform-neutral contest, highlighting novel and innovative mobile applications utilizing any computing architecture (standalone, client/server, client/proxy/server, peer-to-peer/ad-hoc, cloud/mobile, others).

Additional papers, tutorials, and demonstrations will be presented throughout the multi-day conference. For a complete list of papers and a full schedule of activities, please visit:

<https://sigmobile.org/mobicom/2017/program.php>.

### **About SIGMOBILE**

SIGMOBILE, the ACM Special Interest Group on Mobility of Systems, Users, Data and Computing (<https://www.sigmobile.org/>) is the international professional organization for scientists, engineers, executives, educators, and students dedicated to all things *mobile*. SIGMOBILE members work in academia, industry, and government. They are students, teachers, practitioners, policymakers, and scientists.

### **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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