

October 16-20, 2017  
Snowbird, UT, USA



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# MobiCom '17

Proceedings of the 23rd Annual International Conference on  
**Mobile Computing and Networking**

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**Association for  
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**The Association for Computing Machinery  
2 Penn Plaza, Suite 701  
New York, New York 10121-0701**

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**ISBN:** 978-1-4503-4916-1

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Printed in the USA

# General Chair's Welcome Message

It is my great pleasure to welcome you to Utah and the 23<sup>rd</sup> Annual International Conference on Mobile Computing and Networking – MobiCom 2017.

The MobiCom conference series serves as a highly selective, premier international forum addressing networks, systems, algorithms, and applications that support mobile computers and wireless networks. MobiCom 2017 continues this tradition with a full and exciting program. Our main technical program features the latest research in mobile computing and wireless and mobile networking. We look forward to keynote addresses by Prof. Hari Balakrishnan from M.I.T. and Cambridge Mobile Telematics, and by Dr. Thyaga Nandagopal from the National Science Foundation. We are pleased that we can host an address by the 2017 SIGMOBILE RockStar winner, Shyam Gollakota, and that 2017 ACM SIGMOBILE Test-of-Time Paper awardee, Giuseppe Bianchi, receives his award at MobiCom. In addition to these main conference events, MobiCom 2017 includes eight co-located workshops, the Mobile App Competition, the MobiCom Student Research Competition, a panel session on Macro Trends in Wireless Research and Experimentation, an N2Women event, and the second edition of the MobiJob student career event.

Heartfelt thanks go to all members of the organizing committee for helping to make MobiCom 2017 a success. TPC co-chairs Ben Greenstein and Kannan Srinivasan assembled and led a world-class program committee to review and select papers for the main technical program. Workshop co-chairs Tam Vu and Bozidar Radunovic were responsible for selecting and organizing the eight co-located workshops. Domenico Giustiniano and Kirk Webb served as demo co-chairs to bring us an exciting set of demos. Poster co-chairs Ioannis Pefkianakis and Kate Ching-Ju Lin ran the poster selection process and worked with Dimitrios Koutsonikolas to select contributions for the student research competition. Eric Eide was our diligent finance chair, while Robert Ricci expertly served as local arrangements chair. (And the pair served as advisors to and in overall support of the general chair.) Our three publicity chairs, Ahmed Elmokashfi, Chunyi Peng and JeongGil (John) Ko, faithfully publicized MobiCom information throughout the whole process. Kyungmin Lee did an amazing job continuously updating the MobiCom website, while Ali Rostami took care of MobiCom's social media presence. Lenin Ravindranath Sivalingam and Long Lu took care of the 5<sup>th</sup> Mobile App competition. Mike Wittie and Feng Qian obtained a student travel grant from NSF and oversaw the grant application process. As registration chair Eugene Chai worked with RegOnline to implement all our registration options. Younki Lee and Neal Patwari served as MobiCom app co-chairs to bring conference details to your smartphones. Finally, Vijay Gopalakrishnan served as MobiJob chair to organize our student career event.

Special thanks go to our SIG sponsor, ACM SIGMOBILE, as well as our financial sponsors: the National Science Foundation (student travel grants); Samsung (gold sponsor); Microsoft (silver sponsor); Google and NEC Labs (bronze sponsors). Additional financial support was provided by EntryPoint and Lucidchart. The support of these organizations is crucial to MobiCom's continued success.

A final word of thanks goes to the MobiCom Steering Committee, Victor Bahl (Chair), Suman Banerjee, Ramesh Govindan, David B. Johnson, Kang Shin and Heather Zheng. Their trust, support and guidance are greatly appreciated.

It is my hope that your stay in Utah's Wasatch Mountains will be enjoyable and that the first MobiCom to be held in the heart of Silicon Slopes will be a memorable and inspiring event.

**Kobus Van der Merwe**

*General Chair*

*University of Utah*

# Technical Program Committee Chairs' Message

Welcome to ACM MobiCom '17, the 23rd Annual International Conference on Mobile Computing and Networking.

MobiCom is the premier forum for cutting-edge research in mobile systems and wireless networks. This year's technical program features 35 outstanding papers, covering a wide variety of topics:

- Wireless access and backhaul
- Cellular systems
- Light communication
- Near field communication
- Localization
- RFID
- Wireless privacy and security
- IoT and wearables
- Data management
- Virtual reality
- Mobile applications and Web

This year's call for papers brought in 307 abstract registrations -- and 186 turned into qualified submissions from Asia, Europe, and the United States.

We again had a heavy PC (30 members) and a light PC (30 members). The two-tiered PC balanced the goals of broader inclusivity and running an effective TPC meeting. The TPC was made up of experts from diverse research areas, and TPC selection also took into account gender, seniority, institution, country, expertise, and academic or industrial background. The TPC included researchers from 10 countries: France, India, Italy, Singapore, South Korea, Sweden, Switzerland, Taiwan, U.K., and the U.S. Twenty percent of the TPC members were female. The TPC also had broad industry participation, with members from Cisco, Google, IBM, Microsoft, and NEC.

The paper review process was double-blind. It was carried out in three phases: First, each paper was reviewed by at least three TPC members, and the top 107 papers were advanced to the second phase. Review scores, in addition to reviewer confidence and normalization with respect to other papers by the same reviewer, were considered in the selection process. In the second phase, each paper was reviewed by at least two more reviewers, followed by an online discussion; that produced 68 papers for the TPC meeting on June 1 and 2 in Seattle, which was the final phase. These 68 papers were discussed at length at the meeting. Eventually, 35 papers were conditionally accepted into the program. The heavy PC participated in all three phases; the light TPC participated only in the first phase.

Each of the 35 papers was assigned a shepherd from the heavy PC. Shepherds' identities were provided to authors, unlike in the previous year. Reviewers remained anonymous. Shepherds coordinated with reviewers to address the review comments and they approved the final versions for publication. The result of this process is a strong and diverse technical program consisting of 35 high-quality papers.

As TPC Co-Chairs, we would like to express our sincere gratitude to everyone who made this technical program possible. We thank all the authors who submitted their great research work to the conference. We are grateful to all the TPC members – their enthusiasm and hard work produced this strong technical program. We also want to thank the entire MobiCom '17 team, especially our General Chair, Kobus Van der Merwe, for his tremendous support and behind-the-scenes effort. We also are grateful to Google for hosting the TPC meeting at its office. Finally, we extend our thanks and appreciation to the MobiCom Steering Committee for their guidance and wisdom.

We hope that you will find the program exciting and thought-provoking.

**Ben Greenstein**

*Technical Program Co-Chair*

*Google, USA*

**Kannan Srinivasan**

*Technical Program Co-Chair*

*The Ohio State University, USA*

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