

## **SIGMOBILE FY'17 Annual Report**

**July 2016 – June 2017**

The purpose of ACM SIGMOBILE is to promote research and development by bringing together researchers and practitioners and fostering interest in the mobility of systems, users, data, and computing. SIGMOBILE will address the above spectrum of topics, sharing one common theme - mobility. The group's technical scope reflects the emerging symbiosis of portable computers and wireless networks, addressing the convergence of mobility, computing and information organization, its access, services, management and applications.

In the past few years, mobile computing is a fast moving, topical, and exciting area of computer science and engineering. Supporting the mobile computing and wireless networking research community, SIGMOBILE sponsors multiple successful conferences and workshops (MobiCom, MobiSys, MobiHoc, SenSys, UbiComp, WUWNet, PerDis, and HotMobile) that are well attended by its members, and generating high-quality and widely cited publications. These are valuable services for SIGMOBILE's members and the community, resulting in a strong Special Interest Group, with about 700 members.

SIGMOBILE's Executive Committee (EC) in this period comprised of:

- Chair: Prof. Suman Banerjee (University of Wisconsin-Madison)
- Vice Chair: Prof. Lili Qiu (University of Texas at Austin, USA).
- Secretary: Dr. Alec Wolman (Microsoft Research, Redmond)
- Treasurer: Prof. Marco Gruteser (Rutgers University)

SIGMOBILE held an election in this year which led to the following new EC to be elected:

- Chair: Prof. Marco Gruteser (Rutgers University)
- Vice Chair: Prof. Jason Flinn (University of Michigan, Ann Arbor, USA).
- Secretary: Prof. Giovanni Pau (LIP6, France)
- Treasurer: Prof. Falko Dressler (University of Paderborn, Germany)

### **Awards**

SIGMOBILE has a number of awards that it bestows of community members every year. In addition to the Outstanding Contributions Award (OCA) for career-long achievements, the Rockstar award for early career achievements, a Distinguished Service Award for service to the community, the Test of Time award for papers that had a significant influence in the community, and various best paper awards at the leading conferences, SIGMOBILE launched a new award this year --- ACM SIGMOBILE Doctoral Dissertation Award for best PhD work in the field. In addition, SIGMOBILE also recognizes some of the best work in the current year, as identified by a selection committee, which are considered the Research Highlights of SIGMOBILE.

Some of the notable award winners are mentioned below.

Outstanding Contributions Award: Prof. Norman Abramson (University of Hawaii)

Rockstar Award: Prof. Shyamnath Gollakota (University of Washington Seattle)

Doctoral Dissertation Award: Vamsi Talla (Advisor: Prof. Shyam Gollakota) and Pengyu Zhang (Advisor: Prof. Deepak Ganesan)

The SIGMOBILE Test of Time award was announced for the second year which were identified by a committee chaired by Dr. Venkat Padmanabhan. The winners are:

- “Performance Analysis of the IEEE 802.11 Distributed Coordination Function,” Giuseppe Bianchi
- “The Cricket Location-Support System,” Nissanka Priyantha, Anit Chakraborty, Hari Balakrishnan
- “Sensing Techniques for Mobile Interaction,” Ken Hinckley, Jeff Pierce, Mike Sinclair, Eric Horvitz
- “Analysis of a Campus-wide Wireless Network,” David Kotz and Kobby Essien
- “Energy-Efficient Computing for Wildlife Tracking: Design Tradeoffs and Early Experiences with ZebraNet,” Philo Juang, Hidekazu Oki, Yong Wang, Margaret Martonosi, Li-Shiuan Peh, Daniel Rubenstein

## Innovative programs

SIGMOBILE is delighted at the significant transformation of its quarterly publication, *GetMobile*, which is a revamped version of the ACM SIGMOBILE Mobile Computing and Communications Review, (MC<sup>2</sup>R). [Each issue of GetMobile consists of a set of regular sections curated by a committed group of editors](#) and has won a lot of praise from the broad community for improved quality of content and articles.

SIGMOBILE has recently launched the SIGMOBILE YouTube channel through which we provide video-recorded talks from our major conferences and workshops. This content is publicly available and anyone can now watch the talks from our conferences at their convenience, even if they were not able to attend the conference itself. There is clearly a significant following this channel has generated, with more than 11,000 views in 2015, with an average of 3 hours of viewing activity daily. Many of our viewers seem to be from diverse countries, including Asia, South America, and Africa, thereby allowing us to reach many more constituents than our conferences and workshops currently does.

SIGMOBILE, in partnership with SIGCOMM, introduced a new event this year, called the Wireless Industry Days, with the goal of allowing greater engagement with our related industry. It was organized as a workshop and was held in the Bay area (co-located with a large industry-focused event) with the goal of allowing leading researchers to present their results to participants from industry. This was an interesting experiment of reaching out in new ways beyond the confines of our core conferences and workshops.

SIGMOBILE also introduced the availability of technical papers in the mobile friendly ePub format which allows readers to better browse such materials on their phones and tablets. We have setup an arrangement by which any SIGMOBILE event can ensure that camera-ready papers can be easily converted into the ePub format and is made available through the ACM Digital Library. This reflects our commitment to keep up with the changing needs of the community and the ways in which we consume content in the modern world.

SIGMOBILE also routinely provides financial support to various community activities. They include CRAWDAD --- a community resource hosted at Dartmouth University that archives research datasets; and Networking Networking Women (N<sup>2</sup> Women) is a community of researchers who foster connections among the under-represented women in computer networking and related research fields.

SIGMOBILE recently celebrated its 20<sup>th</sup> anniversary at through its various conferences.

## Challenges and considerations facing the community

**Identifying community projects that SIGMOBILE can fund:** SIGMOBILE has created the Mobile Computing Community Research (MCR) fund to support activities of broad community interest (such as CRAWDAD and N<sup>2</sup>Women). However, we need to work harder to identify other projects that this community can and should support.

**Greater industry engagement:** We believe that SIGMOBILE can engage even better with the significant mobile and wireless industry that is having such a significant impact in the world today. We have taken some initial steps, e.g., the Wireless Industry Days workshop, the revamped GetMobile publication with a broader appeal. But much more can and should be done, and we need to look for better and greater ways of engaging with our broader industry.

**Conference co-locations:** SIGMOBILE today sponsors multiple major conferences --- MobiCom, MobiHoc, MobiSys, SenSys, UbiComp, along with two newer additions, PerDis and WUWNet. Each conference has

slightly different focus, has thrived over the years, and is considered a premier venue in the field. However, sometimes there is a concern that too many conferences may dilute a community and there may be need for periodic co-locations and greater coordination. This is an issue that requires further introspection.

### **Summary**

Mobile computing and wireless networking are among the fastest growing fields within computer science and engineering, and as a result SIGMOBILE continues to be a strong, successful, well-supported organization. The SIG's conferences and workshops are well attended, creating a wealth of publications for the ACM digital library and the SIG's members. The community continues to create significant impact both technically and to the broader society through research, education, and other activities.