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MobiCom '15

Proceedings of the 21st Annual International Conference on
Mobile Computing and Networking

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**Association for
Computing Machinery**

Advancing Computing as a Science & Profession

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General Chairs' Welcome

MobiCom 2015 represents a unique experience, bringing together a premier forum on Mobile Computing and Networking with the land of *savoir-vivre* and the amazing city of Paris.

This year's MobiCom continues its tradition of excellence and diversity to illustrate cutting-edge developments within the field. The research and innovation presented at the MobiCom'15 conference play an integral role in all sectors of our economy and society; both by strengthening their foundation as well as advancing towards the future. Paris, the City of Lights, provides an ideal balance between intellectual work and the numerous pleasures that the city can offer — be it museums, gastronomy or simply enjoying the beauty of its surroundings. Paris is not only a hot spot for tourism, but also a high-tech corridor with its universities, large company headquarters and myriads of SMEs. We are very pleased to welcome you to various locations around the city, such as the Jussieu Campus of UPMC Sorbonne University in the vibrant heart of Paris, the Pasteur Institute facility where the main event is hosted, and of course, the Eiffel Tower landmark of our capital city.

A dedicated team of individuals has devoted their time and expertise to make MobiCom 2015 enjoyable for you in all dimensions.

This weeklong event is articulated around the main conference and its strong program that was put together by Sneha Kumar Kasera and Heather Zheng, along with the support of their solid program committee.

We have enriched the technical program with high profile keynotes and invited talk presentations. We hope that they will inspire and influence your thoughts and vision for the future.

- *Agility and Fragility in a Real-Time World*, Gilles Grapinet (Atos SEVP & Worldline CEO)
- *Research Challenges and Opportunities in a Mobility Centric World*, Jim Kurose (Umass and NSF)
- *European Research Towards 5G*, Rémy Bayou (European Commission, DG Connect)

In addition, participants will view and discuss state of the art demo and poster presentations in a session organized by Thanasis Korakis, Nathalie Mitton and Aki Nakao for the demos; and Fan Ye, Gustavo Marfia and Gaogang Xie for posters. Our student research competition co-chairs, Mehmet Can Vuran and Andrzej Duda, have selected the best student poster from a highly talented pool. Wenjun Hu, Rui Aguiar and Hirsohi Esaki have put together a panel on a hotly debated topic “Big data, IoT, ... buzz words for academia or reality for industry.” Lars Wolf, Dae Young Kim, and Xia Zhou have done an excellent job as publicity co-chairs, as has Hubert Tardieu acting in the role of corporate liaison chair.

Marco Leverato, Marcelo Dias de Amorim and Jorg Wilmer have selected 9 informative workshops that nicely complement the conference on core topical subjects. Finally, we will bring together the MobiCom community for a celebratory banquet organized at the historic Maison des Polytechniciens.

MobiCom has a longstanding dedication to promoting student participation. Our student travel grant chairs, Mario Gerla, Jiannong Cao and Martin May, have used the generous support from our government agency supporters and corporate sponsors to allow grant awardees the opportunity to attend this event.

MobiCom 2015 also materializes into proceedings. Aline Viana deserves our special thanks in supporting the authors and orchestrating the conference's content, also working with Lisa M. Tolles and the Sheridan Communications team.

We knew that organizing MobiCom would require a huge effort. This comes true as the result of a dynamic, motivated and friendly team composed of Manuella Portier, Frederic Vaissade, Nina Kurose and Marguerite Sos, supported by PhD candidates, Post-Docs and faculties of the Networking research group at LIP6/UPMC, the LINCS laboratory, and our other supporting institutions. Our sincere gratitude for your time and effort to

master all issues and challenge the unpredictable. The web site was designed and managed by our preferred team composed of Rita Tse and Yubin Xiao. Our gratitude also goes to the Steering Committee for their trust, support and guidance.

We would especially like to commend our two award winners this year. Romit Roy Choudhury, recipient of the 2015 SIGMOBILE RockStar Award, is recognized for outstanding research made early on in his career; and Prof. Mario Gerla, who is awarded this year's SIGMOBILE Outstanding Contribution Award, for his significant contributions to the field of mobile computing, communications and wireless networking.

We are very grateful to our sponsors for their financial support and confidence that has enabled us to organize a high-level event in a beautiful venue. Thanks to Atos Worldline and NSF (Platinum sponsors); SIGMOBILE (Gold sponsor); CISCO, Google, and HP (Silver sponsors); Alcatel-Lucent, Huawei, Inria, LIP6, Microsoft, NEC laboratories, Orange, Technicolor, and UPMC (Bronze sponsors).

Our objective is to provide you with a memorable MobiCom 2015 conference. We hope that you take advantage of this enriched and busy week in Paris to discuss and share your *savoir-faire*, as well as to enjoy our unique art of living.

Serge Fdida

*MobiCom 2015 General Chair
UPMC Sorbonne University, France*

Giovanni Pau

*MobiCom 2015 General Chair
UPMC Sorbonne University, France*

Technical Program Committee Chairs' Message

Welcome to ACM MobiCom 2015, the 21st Annual International Conference on Mobile Computing and Networking. MobiCom is the premier forum for publishing and presenting cutting-edge research in mobile systems and wireless networks. The technical program this year features 38 outstanding papers that cover a wide variety of topics including energy, sensing, security, wireless access, applications, localization, Internet of things, mobile cloud, measurement and analysis. We created a new *Experience* track this year to encourage authors to present extensive experiences with implementation, deployment, and operations of mobile computing and wireless networks. One of the accepted papers is an Experience paper on cellular networks.

This year's call for papers attracted 207 qualified submissions from across the globe that were carefully reviewed by 46 Technical Program Committee (TPC) members (+2 TPC chairs) along with a selected group of external experts. The TPC was formed with the goal of covering diverse research expertise as well as diverse perspectives and approaches. The TPC included researchers from 12 countries including China, France, Germany, India, Italy, Singapore, South Korea, Spain, Sweden, Switzerland, UK, and USA. 25% of the members were female, the highest ever in the history of MobiCom. We also had broad industry participation with TPC members from Alcatel-Lucent, Google, HP, IBM, Microsoft, NEC, and Telefonica.

The paper review process was double-blinded and carried out in three phases. In the first phase, each paper was reviewed by at least three TPC members, and the top 112 papers were selected for the second phase. In addition to reviewer scores, reviewer confidence and normalization with respect to other papers in a reviewer's pile, were also considered in selecting papers. In the second phase, each paper was reviewed by at least two more reviewers followed by an online, often intense, discussion, producing 68 papers for the final phase. The final TPC meeting was held on May 28th and 29th in Salt Lake City, Utah. These 68 papers were organized by their topic areas, and discussed at length at the meeting. Eventually, 38 papers were shortlisted for inclusion in the program and a shepherd from the TPC was assigned to each of these papers. As the last step, each of the shortlisted papers was shepherded through a "blind" process where the authors interacted with all the reviewers and the shepherd to address the review comments without knowing the reviewers' or the shepherds' identities. The end result is an exciting technical program composed of 38 very high quality papers.

During the review process, Prof. Robin Kravets, the TPC co-chair of MobiCom 2013, handled the papers that were co-authored by TPC chairs, and those that had conflict-of-interest with both TPC chairs. To ensure fairness and preserve the anonymity of all authors and reviewers, the assignment of reviewers, the reviews and discussions of these papers were done out of band without any exposure to the TPC chairs.

As TPC co-chairs, we would like to express our sincere gratitude to many for their hard work and contributions. First, we thank all the authors who submitted their great research to the conference. We are very grateful to all the TPC members and external reviewers – their dedication and enthusiasm were instrumental in constructing the strong technical program. We also thank the entire MobiCom 2015 team, especially General chairs Giovanni Pau and Serge Fdida, Publication chairs Aline Viana and Nina Kurose, and Lisa Tolles at Sheridan Communications, for their tremendous support and behind-the-scenes effort. Finally, we extend our thanks and appreciation to the MobiCom Steering Committee for their guidance and wisdom.

Again, welcome to MobiCom 2015 in the beautiful city of Paris. We hope that you will enjoy the program!

Heather Zheng

Technical Program Co-Chair

University of California at Santa Barbara, USA

Sneha Kumar Kasera

Technical Program Co-Chair

University of Utah, USA

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