NEWS RELEASE

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MOBICOM 2018 HIGLIGHTS INNOVATIONS THAT ARE SHAPING THE CONNECTED WORLD

Highlights Include Keynote Address by Mukesh Ambani, Chairman of India's Largest Private Company

New York, NY, October 22, 2018 – The Association for Computing Machinery's Special Interest Group on Mobility of Systems, Users, Data and Computing (SIGMOBILE) will hold its flagship annual Conference on Mobile Computing and Networking (MobiCom) from October 29 to November 2 in New Delhi, India. Now in its 24th year, MobiCom is a highly selective, premier international forum for addressing networks, systems, algorithms and applications that support mobile computers and wireless networks.

"The phenomenal growth of mobile communications in the last decade has profoundly impacted both the wider world and our daily lives" said MobiCom 2018 Technical Program Co-Chair Yingying (Jennifer) Chen of Rutgers University. "MobiCom is the premier international venue on mobile computing and wireless networks, where the connected world of tomorrow is first seen in the exciting technologies that are unveiled here." Added Technical Program Co-Chair Kyle Jamieson of Princeton University, "This year's single-track program is bigger than ever and takes a comprehensive approach to the field — reflecting the emerging symbiosis of mobility, wireless networks, and networked/computer systems."

In addition to a full roster of leading-edge research papers, demonstrations and workshops, this year's program will also include a series of Topic Preview Sessions, designed to familiarize early-career researchers in and adjacent to the MobiCom community with areas of research they may not be as familiar with, as well as broaden the MobiCom community itself. Planned sessions include introductions to In-Body Communications, Localization and Tracking, AR, VR and Vision, and Visible Light Communications, among other subjects.

MobiCom 2018 HIGHLIGHTS

Keynotes

"A Look at Reliance Industries"

Mukesh Ambani, Reliance Industries Limited
During his tenure of over 30 years, Ambani has successfully made Reliance (a company with more than $100 billion valuation) India's largest private sector enterprise. Ambani will discuss how substantial synergies, productivity gains and production growth in Reliance's energy and materials business has allowed the company to remain competitive. As telecommunications is a major component of Reliance's portfolio, Ambani will discuss how he sees the growth of mobile communications in the coming years.

"Keeping the Internet Open with an Open-Source Virtual Assistant"
Monica Lam, Stanford University
Virtual assistants, such as Alexa, Google Home, and Siri are revolutionizing our digital life. In the future, they will provide us with a uniform, fully personalized natural language interface to all our diverse data sources, web services and IoT devices. In her keynote, Lam will propose a collaborative research effort to develop open source virtual assistant technology, in concert with a commercially viable distributed infrastructure that safeguards users' data privacy, supports interoperability, and promotes open competition.

"The Science of Social Cyber-Security"
Kathleen M. Carley, Carnegie Mellon University
Carley will discuss social cybersecurity, an emerging scientific area focused on characterizing, understanding, and forecasting cyber-mediated changes in human behavioral, social, cultural and political outcomes, and to build the cyberinfrastructure needed for society. Social media and personalized data assistants are critical technologies that affect the ways humans navigate this space, interact and engage in discussions. Key examples will be drawn from areas such as disaster response, state stability, and the distribution of false information.

"The Early International Activities in the Arpanet, Its mutation into the Internet, and some further Regional Extensions"
Peter T. Kirstein, University College London
Kirstein will consider some of the activities involved in setting up the International Internet and its precursors. It will consider later efforts in promoting the technology in regions that it had not reached earlier. There will be consideration not only the technical development, but also the political climate which either encouraged or prevented its take-up. Moreover, the importance of personal networks at many stages of the story will be highlighted.

<u>Athena Lecture</u>
"The Future of Wireless and What It Will Enable"
Andrea Goldsmith, Stanford University
Wireless technology has enormous potential to change the way we live, work, and play over the next several decades. Breakthrough energy-efficiency architectures, algorithms and hardware will allow wireless networks to be powered by tiny batteries, energy-harvesting, or over-the-air power transfer. Finally, new communication systems based on biology and chemistry to encode bits will enable a wide range of new micro and macroscale applications. There are many technical challenges that must be

overcome in order to make this vision a reality. This talk will describe what the wireless future might look like along with some of the innovations and breakthroughs required to realize this vision. This talk is a part of Goldsmith's receipt of the ACM Athena Lecturer Award, which celebrates women who have made fundamental contributions to computer science.

Awards

SIGMOBILE RockStar Award

Kyle Jamieson, Princeton University

Jamieson's research interests are in all aspects of wireless computer networks, from the basic architecture of the wireless physical layer to high-level security properties. The two main strands of work he has pursued involve bringing phased array signal processing indoors and improving the capacity of wireless networks in a world with many billions of wireless devices, most of which transmit in wireless spectrum that is unplanned by any central authority.

SIGMOBILE Outstanding Contribution Award

Teresa Meng, Stanford University

Meng's research activities during the first 10 years at Stanford focused on low-power circuit and system design, video signal processing, and wireless communications. In 1999, Dr. Meng took leave from Stanford and founded Atheros Communications, Inc., which developed semiconductor system solutions for wireless network communications products. She returned to Stanford in 2000 to continue her research and teaching at the University.

Test of Time Award

Don Towsley, University of Massachusetts Amherst

Towsley is a two-time recipient of the Best Paper Award of the ACM SIGMETRICS conference.
He has been an editor of the IEEE Transactions on Communications, IEEE/ACM Transactions on Networking, and Journal of Dynamic Discrete Event Systems. He is currently on the Editorial boards of Networks and Performance Evaluation. He was a Program Co-chair of the joint ACM SIGMETRICS and PERFORMANCE '92 conference.

Test of Time Award

Victor Bahl, Microsoft Research

Bahl is known for his research contributions to white space radio data networks, radio signal-strength based indoor positioning systems, multi-radio wireless systems, wireless network virtualization, and for bringing wireless links into the datacenter.

Research Presentations

More than 40 research papers will be presented throughout ten different sessions.
Visit the MobiCom 2018 program page for the full list of papers.

Session titles include:
Living on the Edge: Mobile Systems at the Network's Edge
Blinded by the Light: AR, VR, and Vision
Slice, Schedule, Repeat: 5G Cellular Networks
What's the Frequency, Kenneth? Millimeter-Wave Networks
Take Me Back to School: Learning and Sensing
Lock it Down! Security, Countermeasures, and Authentication
Where are U Now? Localization and Motion Tracking
Running on Empty: Backscatter and Low-Power Systems
We are the Engineers: Mobile Systems and Networking
Multi-Modal and Cross-Technology Communications

Workshops

1st International Workshop on Communication and Computing in Connected Vehicles and Platooning
Technologies for the Wireless Edge
13th Workshop on Challenged Networks (CHANTS 2018)
1st Workshop on Complex Networked Systems for Smart Infrastructure (CNetSys)
2nd ACM Workshop on Millimeter Wave Networks and Sensing Systems (mmNets)
1st International Workshop on Future Industrial Communication Networks (FICN)
12th International Workshop on Wireless Network Testbeds, Experimental evaluation &
Characterization (WiNTECH 2018)
Technologies for the Wireless Edge (EdgeTech)
10th Wireless of the Students, by the Students, and for the Students Workshop (S3)

Additional Highlights

APP Contest
The 6th Mobile App Competition encourages the development of novel and innovative mobile applications utilizing any computer architecture. It is intended as a platform-neutral contest. Applications can be developed for, but not limited to Android, iOS, Windows Phone, Blackberry OS10 and HTML5. Three top winning apps will be promoted on the MobiCom website and receive a prize during the conference.

Student Career Evening
This event seeks to bring together top companies in the field with the best and brightest students and post-docs from the ACM SIGMOBILE community. MobiJob aims to assist with both open full-time positions, as well as fixed-duration internships.

N2Women Young Researcher Fellowship Awards

These awards will partially cover a young researcher's travel cost (up to $1,000) to a meeting where an N2Women event will be held. In exchange, the young researcher must help organize the N2Women meeting. The benefit of doing the organization, in addition to the travel funds, is for the young researcher to connect with the organizers of the conference who are, typically, leaders in the research field.

About SIGMOBILE

SIGMOBILE, the ACM Special Interest Group on Mobility of Systems, Users, Data and Computing 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**,** 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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