4th IEEE International Conference on Cloud Networking
Niagara Falls, Canada • 5-7 October 2015

IEEE CloudNet'15
Special Session

SS4: Cloud-Assisted Internet-of-Things

Call for Papers

The special session focuses on Cloud-Assisted Internet-of-Things. With recent advancements in sensing, communication and networking technologies, new devices are being used and deployed as IoT networks that have the potential to be deployed broadly and at extremely large scale in the near future. The notion of IoT networks has triggered numerous applications and implementations such as body sensor networks, healthcare networks, underwater sensor networks, and participatory mobile crowd sensing. As the processing, storage, and communication capabilities of individual IoT device are limited, the assistance from the current cloud computing technology may help release the burden, reduce the energy consumption, and prolong the battery life of IoT devices. With the help of cloud, the data from IoT devices may reside in the cloud, waiting for the queries from data consumers with the advantages of easier data management.

The session covers all related topics, including but not limited to:

- Services and economics of cloud-assisted IoT network
- Applications cloud-assisted IoT such as wearable sensor networks, healthcare sensor networks, and participatory sensing networks
- Practical implementations of protocols in cloud-assisted IoT networks
- Cross-layer design for cloud-assisted IoT networks
- Emerging and needed standards in cloud-assisted IoT network
- Big data analysis for cloud-assisted IoT networks
- Security and privacy in cloud-assisted IoT networks
- Data privacy, data authenticity, query result completeness, data freshness, and the system accountability of cloud-assisted IoT networks.

Important dates

Paper Submission: June 30, 2015
Notification of Acceptance: August 3, 2015
Final Paper: August 17, 2015

Session organizers

Dr. Baek-Young Choi is an Associate Professor in the Department of Computer Science and Electrical Engineering at the University of Missouri–Kansas City, USA. She received her Ph.D. in Computer Science and Engineering from the University of Minnesota, Twin Cities. She held positions at Sprint Advanced Technology Labs, and the University of Minnesota, Duluth, as a post-doctoral researcher, and as a 3M McKnight distinguished visiting assistant professor, respectively. She has been a fellow of the U.S. Air Force Research Laboratory's Visiting Faculty Research Program (AFRL-VFRP), and Korea Telecom - Advance Institute of Technology (KT-AIT). Her research interests lie in the broad area of algorithm and system development for diverse types of networks, especially in resource management and network monitoring. She has authored the book, 'Scalable Network Monitoring in High Speed Networks', and co-edited the book, 'High Performance Cloud Auditing and Applications.' She has served on NSF and DOE panels multiple times and is currently an Associate Editor for the Elsevier Journal of Computer Networks and Springer Journal of Telecommunication Systems. She has also served as a general chair, technical program chair, technical program committee member, organizing committee member, session chair, and reviewer for many international conferences and workshops. Her research has been supported by several agencies including NSF, Sprint-Nextel, AFRL, U. Missouri System, and UMKC. She is a senior member of ACM and IEEE, and a member of IEEE Women in Engineering.

Dr. Deep Medhi is a Curators' Professor in the Department of Computer Science and Electrical Engineering at the University of Missouri–Kansas City, USA. He received B.Sc. in Mathematics from Cotton College, Gauhati University, India, M.Sc. in Mathematics from the University of Delhi, India, and his Ph.D. in Computer Sciences from the University of Wisconsin-Madison, USA. Prior to joining UMKC in 1989, he was a member of the technical staff at AT&T Bell Laboratories. He was an invited visiting professor at the Technical University of Denmark, a visiting research fellow at Lund Institute of Technology, Sweden, a research visitor at Princeton University, UPMC, Paris, France, and the University of Campinas, Brazil (under the Brazilian Science Mobility Program). He also served as a Fulbright Senior Specialist. He is the Editor-in-Chief of Springer's *Journal of Network and Systems Management*, and is on the editorial board of *IEEE/ACM Transactions on Networking*, *IEEE Transactions on Network and Service Management*, and *IEEE Communications Surveys & Tutorials*. He is co-author of the books, *Routing, Flow, and Capacity Design in Communication and Computer Networks* (2004) and *Network Routing: Algorithms, Protocols, and Architectures* (2007), both published by Morgan Kauffman/Elsevier.

Dr. Sejun Song is an Associate Professor in the Department of Computer Science Electrical Engineering at University of Missouri–Kansas City, USA. He directs the Trustworthy Systems and Software Research Lab. Song and his research team conduct research in the areas of trustworthy information and computing systems and software including resilient network and system management, software-defined networks, cloud computing auditability, mobile cloud computing, security, high availability, data storage, and embedded systems. Song received his Ph.D. in Computer Science and Engineering from University of Minnesota, Twin Cities in 2001. Song worked for Texas A&M University, College Station as an Assistant Professor in the Department of Engineering Technology and Industrial Distribution (ETID) and a director of the Cisco Test Engineering Center (Cisco-TEC). Prior to joining academia, Song has been working for various industries including Cisco Systems (senior engineer), Honeywell Research Lab (research staff), and Positive Networks (director). A couple of his initiative projects became multi-million dollar network system products. Song is a recipient of Montague-CTE (Center for Teaching Excellence) Scholar for excellence in undergraduate teaching (2013 - 2014) and a Faculty Teaching Excellence Award (2010) in TAMU, four Air Force Research Lab's Visiting Faculty Research Fellowship Awards (2011 - 2014), a Cisco Summer Fellowship Award (2010), and has received several best research paper/video awards including Mobisys 2014, ICCCN 2014, and CIEC 2013. Song's projects have been funded internationally by various agencies including the Air Force Research Lab (AFRL), Cisco Systems, the National Aeronautics and Space Administration (NASA), the Texas A&M University, Korea Telecom Research Center, and Electronics and Telecommunications Research Institute, Korea (ETRI).