Workshop Proposal

The 16th IEEE International Conference on Ubiquitous Intelligence and Computing
(UIC 2019)

Green Cloud for Ubiquitous Intelligence and Computing Applications

Cloud computing fulfills the processing and storage requirements at large sale through geographically distributed datacenters using pay-as-you-go model. With the emergence of the *Ubiquitous Intelligence and Computing*, the cloud and its related paradigms such as cloudlet, fog, edge, and microdata centers have gained a central role for information processing and high volume data storage. The variants of cloud have also addressed the latency and mobility issues faced by *Ubiquitous Intelligence and Computing applications* by providing the services at the edge of the network. Hence, the novel paradigm of cloud and its flavors have gained expansion and extension from the core to the edge, providing the centralization and high geographic distribution at the same time. The billions of ubiquitous devices have been connected and this figure are going to increase by two folds in the upcoming years. Subsequently, it will significantly increase the computation and storage needs. This will result in a huge increase in the heat generating storage and processing hubs. Consequently, a great amount of energy production results in CO_2 emissions that will bring uncertainty in environmental changes. The risk of global warming is increasing day-by-day. The sea level is going to rise and the geographic maps will be changed accordingly. Moreover, the energy requirements to power these Information and Communication Technologies (ICT) entities will also be augmented. In short, the consequences of huge energy consumption will put the globe at a huge risk. Hence, it is important for the governments, researchers and the industrialists to come forward and agreed upon an agenda for greening the world through ICT.

This workshop aims to address the challenge by greening the cloud and its variants (fog, edge, cloudlet, micro data centers). The purpose is to bring the academia, researchers, and industries, working in the discussed domain, on a single platform to come with original, innovative and futuristic sustainable solutions to contribute to a greener world.

The topics of this workshop include but not limited to:

- Green cloud computing

- Energy-aware fog, edge computing

- Environment-friendly data centers, cloudlets, and micro data centers frameworks

- Green communication for Cloud-fog-IoT convergence

- Parallel and distributed algorithms for green data centers

- Energy-aware scheduling policies for Cloud, fog, edge computing

- Energy-aware communication protocols in Software Defined Internet of Vehicles (SDIoV)

- Low power technologies for Cloud-IoT environment

- A tradeoff analysis of energy-efficiency and Quality of Service (QoS)

- Blockchain technology and green computing relationship

- SDN architecture for Green cloud computing

- Secure SDN mechanisms for Ubiquitous Intelligence applications

- Energy efficient SDN-Based frameworks for Cloud-IoT environment

IMPORTANT DATES

March 30, 2019

Paper Submission Deadline

May 01, 2019

Authors Notification

May 19, 2019

Final Manuscript Due

Aug 19 - Aug 23, 2019

Conference Date

TPC Members

- Philippe ROOSE, IUT de Bayonne/LIUPPA-T2I, Anglet, France
- Rémi Sharrock, Telecom ParisTech, LTCI, IMT, Paris Saclay, France
- AbdelMuttlib Ibrahim Abdalla, University of Malaya, Malaysia
- Jalil Boudjadar, Aarhus University, Aarhus, Denmark
- Kayhan Zrar Ghafoor, Shanghai Jiao Tong University, China
- François Thibolt, University Paul Sabatier, Toulouse, France
- Ali Safaa Sadiq, Monash University, Malaysia
- Tom Guérout, LAAS, CNRS, Toulouse, France
- Nadeem Abbas, Linnaeus University, Sweden
- Muhammad Affan Alim, PAF-Karachi Institute of Economics and Technology, Pakistan
- Chandreyee Chowdhury, Jadavpur University,Kolkata, India
- Muhammad Adeel Pasha, Lahore University of Management Sciences, Pakistan
- Shahid Hussain, COMSATS University Islamabad, Pakistan
- Syed Mohammad Irteza, Lahore University of Management Sciences, Pakistan
- Adnan Ahmed Siddiqui, Hamdard University, Pakistan
- Farhan Ahmed Siddiqui, University of Karachi, Pakistan
- Syed Imran Jami, Mohammad Ali Jinnah University, Karachi, Pakistan
- Saleem Khan, COMSATS University Islamabad, Pakistan
- Shariq Mahmood Khan, NED University of Engineering & Technology, Pakistan
- Muhammad Mubashir Khan, NED University of Engineering & Technology, Pakistan
- Muhammad Faisal Khan, Hamdard University, Pakistan
- Noor Zaman, Taylor University, Malaysia
- Hasan Ali Khattak, Comsats University Islamabad, Pakistan
- Muhammad Riaz, University of Lahore Islamabad Campus, Pakistan
- Basit Raza, Comsats University Islamabad, Pakistan

- Muhammad Imran, Comsats University Islamabad, Pakistan

Guest Editors Information

Ghufran Ahmad is serving as Assistant Professor at the Department of Computer Science, COMSATS University Islamabad, Pakistan. He completed PostDoc in 2015 from Department of Computer Science and Digital Technology, Faculty of Engineering and Environment, Northumbria University, Newcastle Upon Tyne, UK. He has received Ph.D. in 2013 from Department of Computer Science, Mohammad Ali Jinnah University (renamed to Capital University of Science and Technology), Islamabad, Pakistan. His areas of research are IoT, Wireless Sensor Networks and Wireless Body Area Networks. He also worked as a visiting scholar at the CReWMaN Lab, Department of Computer Science and Engineering, University of Texas at Arlington in 2008-09. He contributed in two book chapters published by Elsevier and IET. Currently, he serves as the Associate Editor of *IEEE Access, Ad Hoc & Sensor Wireless Networks (AHSWN), Hindawi J. Sensors and Hindawi J. Wireless Communications & Mobile Computing.* He was a co-chair at a Special Session Within the 8th International Conference on Sensor Networks - SENSORNETS 2019 (http://www.sensornets.org/IoMT.aspx) and a co-chair at IEEE International Conference On Internet Of Things (IThings-2019) At Atlanta, USA (http://imets.asastechno.com/). He is also leading a special issue as a Guest Editor in the *International Journal of Distributed Sensor Networks-IJDSN*
(https://journals.sagepub.com/page/dsn/collections/special-issues/het-iomt-ambient-assisted-living).
 Email: ghufran.ahmed@ieee.org

Saiful Islam received his Ph.D. in Computer Science at the University Toulouse III Paul Sabatier, France in 2015. He is Assistant Professor at the Department of Computer Science, Dr. A. Q. Khan Institute of Computer Science and Information Technology, Rawalpindi, Pakistan. Previously, he served as Assistant Professor for three years at the COMSATS University, Islamabad, Pakistan. He has been part of the European Union-funded research projects during his Ph.D. He was a focal person of a research team at COMSATS working in O2 project in collaboration with CERN Switzerland. His research interests include resource and energy management in large-scale distributed systems (Edge/Fog, Cloud, Content Distribution Network (CDN)) and the Internet of Things (IoT).
Email: saif@kicsit.edu.pk, saiflu2004@gmail.com

Suleman Khan is a faculty member at School of Information Technology, Monash University Malaysia. He received his Ph.D. (Distinction) from Faculty of Computer Science and Information Technology, University of Malaya, Malaysia (2017). Previously, he completed several Master Programs including Master of Science-MS (Distributed Systems) from Comsats Institute of Information Technology,

Abbottabad, Pakistan (2011), Master of Business Administration (HRD) from Institute of Management of Sciences, Hayatabad, Pakistan (2007) and Master of Science M.Sc (Computer Science), from University of Peshawar, Pakistan (2006). Dr. Suleman has published 45+ High Impact Research articles in reputed international journals and conferences. He is currently an IEEE member and his research areas include but are not limited to Network Security, Network Forensics, Software Defined Networks (SDN), Internet of Things (IoT), Cloud Computing, and Vehicular Communications. He is organizing a Special Session on "Security and Privacy in Internet of Things (IoT)". (https://docs.wixstatic.com/ugd/306749_090467a4e8e24d448bf8c57e04b1129c.pdf).

E-mail: suleman.khan@monash.edu