**Internet/Web of Things for Future Era (IWFTE)**

The emerging hyper-world has led to the rapid development of the Internet/Web of Things (IoT/WoT) paradigm which aims at interconnecting humans, things, and information. Web of Things also includes the communication among the physical and virtual things. In particular, the features of things are heterogeneity and resource-constrained. IoT/WoT has a wide range of applications in domains such as the health sector, space research, manufacturing industries, dynamic resource allocation, data mining, agriculture, wireless sensor networks, automobiles, and education. The key technological components of IoT are radio frequency identification (RFID), Zigbee, wifi, nanotechnology, mobile phones, actuators, and communication protocols. 5G technology will play a major role in providing solutions to the challenges faced by the IoT. Especially, the 5G network slicing concept helps in the realization of network virtualization. In any IoT environment, sensors play a major role in collecting data periodically.

The IoT/WoT architecture comprises the infrastructure layer, service layer, communication layer, and application layer. The infrastructure layer includes the devices, access points, and gateways. The service layer provides application programming interfaces. The communication layer contains the protocols and algorithms. The application layer includes the mashup engines and domain-specific mashup editors. These layers build the IoT/WoT to provide services to users based on their unique requirements. One of the major challenges in IoT is handling errors at various phases. The errors may occur during data collection from the sensor network, during transmission, and also in the storage place. Then the statistical analysis of this huge time-series data is a complex task. Few other aspects which need research solutions are architecture modeling, communication channel allocation, protocol design, computation power, and query optimization. An evolving concept designed to achieve dynamic web is the adaptive IoT and WoT convergence platform. This provides synchronization among the devices and implementation of new service functionalities.

In the future, the Wisdom Web of Things will emerge as an important paradigm in introducing intelligence in computing. It is observed that this paradigm can transform wisdom as a service in the modern world. Though there arises a tremendous scope for Internet/Web of Things in the future, the important factors which are to be considered include reliability, quality of service, security, interfacing, and interoperability.

Topics of interest include, but are not limited to, the following:

* Emerging trends on wisdom web of things: Potential applications, challenges, and research directions
* Emerging tools and techniques in convergence platform towards the evolution of adaptive Internet of Things
* Advances in recent technologies for transforming fog computing architecture towards Web of Things
* Advances in data security and privacy preservation methodologies for social Internet of Things (SIoT)
* Evolution of industrial market perspective based IoT/WoT architecture for connected and autonomous vehicles
* Emerging trends in collaborative product design platform and computational space for Web of Things
* Evolution of human-centric semantic Web of Things: Opportunities, challenges, and research directions
* Enabling recent technologies in physical mashups of application layer for Web of Internet architecture
* Impact of REST-based Web of Things architecture for industry 4.0: Industry automation in the future era
* Role of security and privacy mechanisms to preserve big data in the world of Internet of Things and sensors
* Emerging trends on social behaviometrics for personalized devices in the Internet/Web of Things era
* Recent technologies in the platform layer of IoT/WoT architecture for multivariable sensors in manufacturing systems
* Innovations of 5G technology in the evolution of smart cities Web of Things: Security challenges and solutions
* Advances in retrieval as a service in the information storage domain of the Internet of Things for the smart generation
* Integration of IPv6 based service discovery for innovations in the computer communications network of Web of Things

**Our Guest Editor Team:**

**Dr. Khalid Haseeb [MGE]**

Assistant Professor,

Department of Computer Science,

Islamia College Peshawar, Peshawar, Pakistan.

**Mail:** [khalid.haseeb@icp.edu.pk](mailto:khalid.haseeb@icp.edu.pk), profkhalidhaseeb@gmail.com

**Google Scholar:** <https://scholar.google.com.pk/citations?user=TTsDOKEAAAAJ&hl=en>

**Research Gate:** <https://www.researchgate.net/profile/Khalid-Haseeb>

**Dr. Tanzila Saba [Co-GE 1]**

Research Professor,

Chair of Information Systems Department,

Prince Sultan University, Saudi Arabia.

**Mail ID:** [tsaba@psu.edu.sa](mailto:tsaba@psu.edu.sa)

**Google Scholar:** <https://scholar.google.com/citations?user=jR1o3pwAAAAJ&hl=en&oi=sra>

**Research Gate:** <https://www.researchgate.net/profile/Tanzila-Saba>

**Official Web Link:**

<https://facultyportal.psu.edu.sa/ViewProfile.aspx?instructorID=2113101>

**Dr. Amjad Rehman Khan [Co-GE 2]**

Assistant Professor,

Computer and Information Sciences - Information Systems – CCIS,

Prince Sultan University, Riyadh, Saudi Arabia.

**Mail ID:** [arkhan@psu.edu.sa](mailto:arkhan@psu.edu.sa)

**Google Scholar:** <https://scholar.google.com/citations?user=23-dOw8AAAAJ&hl=en&oi=sra>

**Profile:** <https://www.psu.edu.sa/en/faculty-details/924>

**Guest Editor Short Bio:**

Dr. Khalid Haseeb [MGE] received the M.S. degree in information technology from the Institute of Management Sciences, Peshawar, Pakistan, in 2009, and the Ph.D. degree in computer science from the Faculty of Computing, Universiti Teknologi Malaysia, Johor Bahru, Malaysia, in 2016.,He is an Assistant Professor with the Department of Computer Science, Islamia College Peshawar, Peshawar, and a Research Fellow with the Artificial Intelligence and Data Analytics Lab, CCIS, Prince Sultan University, Riyadh, Saudi Arabia. He has an experience of several years in teaching, research, and development. His research areas include wireless sensor networks, ad hoc networks, network security, machine learning, Internet of Things, software-defined networks, and cloud computing. Dr. Haseeb involves as a referee for many reputed international journals and conferences.

Dr. Tanzila Saba [Co-GE 1] received her Ph.D. degree in document information security and management from the Faculty of Computing at Universiti Teknologi Malaysia (UTM) in Johor Bahru, Malaysia in the year of 2012. She is an Associate Professor and an Associate Chair of the Information Systems Department, College of Computer and Information Sciences at Prince Sultan University in Riyadh, Saudi Arabia. She is the Leader of the Artificial Intelligence and Data Analytics Lab and senior member of IEEE. She has full command of a variety of subjects and taught several courses at the graduate and postgraduate levels. On the accreditation side, she is a skilled lady with ABET & NCAAA quality assurance. Her most publications are in biomedical research published in ISI/SCIE indexed. Her primary research focus in recent years is medical imaging, MRI analysis, and soft computing. Dr. Saba won the Best Student Award in the Faculty of Computing UTM for 2012. Due to her excellent research achievement, she is included in Marquis Who’s Who (S & T) 2012. She is currently an editor and a reviewer of reputed journals and on the panel of TPC of international conferences. She is the professional member of ACM, AIS, AAAI and IAENG. She is the PSU WiDS (Women in Data Science) ambassador at Stanford University. Her Publications are around 382 and her citations are around 12201 with an h- index of 70.

Dr. Amjad Rehman [Co-GE 2] received his Ph.D. in information security from the Faculty of Computing at UTM in Malaysia in the year of 2010. He is working as an Assistant Professor in the Department of Computer and Information Sciences at Prince Sultan University in Saudi Arabia. He is a Senior Researcher in Artificial Intelligence and Data Analytics Lab and a Senior Member of IEEE. He is PI in funded projects from MOHE Malaysia. His area of interest includes Machine Learning, Information Security, Research, Teaching, Consultation, Games, Data Mining and Health Informatics. Dr. Rehman received the Rector Award for 2010 as a Best Student in the university. The sum of citations for his Publications are around 9425 with an h- index of 63.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Submission Timeline**

Article Submission Deadline - 16.08.2023

Authors Notification Date - 21.10.2023

Revised Papers Due Date - 26.12.2023

Final notification Date - 25.02.2024

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_