



ICICC-2024
**7th International Conference on Innovative Computing and
Communication**

ORGANIZED BY SHAHEED SUKHDEV COLLEGE OF BUSINESS STUDIES,
UNIVERSITY OF DELHI, NEW DELHI IN ASSOCIATION WITH NATIONAL INSTITUTE
OF TECHNOLOGY, PATNA & UNIVERSITY OF VALLADOLID SPAIN
On 16-17th FEBRUARY 2024.

***** **CALL FOR PAPERS** *****

SPECIAL SESSION ON

Massive IoT Connectivity for Large-Scale Mobile Communications

SESSION ORGANIZERS:

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SESSION DESCRIPTION:

Massive IoT is transforming how we do business, from being able to monitor water quality to identifying when a package is on its way. And during the next few years, it is anticipated that massive IoT applications would grow quickly, for instance, Internet of Things (IoT) is leveraging the digital transformation power of improving LTE IoT and developing 5G networks. Massive IoT applications are a natural fit for cellular low-power wide-area networks (LPWANs). These cellular networks match the requirements of a massive IoT deployment. They can be built on advanced LTE technologies like LTE-M and narrowband IoT (NB-IoT). LTE-M and NB-IoT utilize narrower bandwidths optimized for low throughput applications. Low data flows, which 2G and 3G have carried for a long time, are witnessing massive migration to 4G and 5G as these older standards sunset worldwide. Massive IoT over cellular networks will only further develop as LTE-M and NB-IoT enhance with every new 5G release. As

connected device numbers increase, LTE-Advanced (LTE-A), LTE-A Pro and 5G promise to meet massive IoT and mobile broadband demands. Cellular LPWANs built in concert with emerging 5G technology delivers options from high-speed and low-latency to energy-efficient solutions. They use cell technology that handles high connection density better. AI, machine learning and edge computing will play significant roles in massive IoT security design, as will stronger authentication methods. Companies investing in massive IoT must firm up security protocols in advance of 5G cellular connectivity. Enhancing security will maintain consumer confidence and prevent unauthorized access. Massive IoT promises new developments in connectivity for all sorts of devices worldwide. However, it will also strain network reliability and security. As more use cases arise, so will more opportunities for invasion of privacy, physical harm and data theft.

Because of their wide applications and rich research contents, many practitioners and academics are attracted to work in these areas. Challenges in complexity and variability of multimedia data have led to revolutions in mobile communications and Edge Computing techniques. Multimedia data, such as digital images, audio streams and motion video programs, exhibit richer structures than simple, isolated data items. With the rapid development of massive IoT communications, the collection and modification of multimedia data have become greatly convenient and easy. Advances in mobile computing techniques, data acquisition technology, hardware, and networks have mutually promoted the development of massive IoT approaches.

The focus of this special session is to present recent advances, original ideas, techniques, algorithms, and the like belonging to a myriad of research areas in massive IoT connectivity and its applications in mobile communications with the final goal of sharing their specific challenges and solutions.

RECOMMENDED TOPICS:

Topics to be discussed in this special session include (but are not limited to) the following:

- Edge-Computing-Based Communication technologies
- Broadband and multimedia systems and applications, with a focus on increased service variety and interactivity
- Massive IoT for Mobile Sensor Communications for future
- Mobile and edge computing frameworks and its architecture, analysis
- Security, safety, edge computing ability/reliability issues in wireless communication systems and applications.
- Dependability measurement, modelling, evaluation, and tools for 5G mobile communication
- Markov edge computing and Monte Carlo Simulation based Distributed Mobile Communications
- Development of open dataset for massive IoT communication
- Applying Machine learning techniques in hybrid Intelligent mobile systems

SUBMISSION PROCEDURE:

Researchers and practitioners are invited to submit papers for this special theme session on **Massive IoT Connectivity for Large-Scale Mobile Communications** on or before [30th October 2023]. All submissions must be original and may not be under review by another publication. INTERESTED AUTHORS SHOULD CONSULT THE CONFERENCE'S GUIDELINES FOR MANUSCRIPT SUBMISSIONS at http://icicc-conf.com/paper_submission.html. All submitted papers will be reviewed on a double-blind, peer review basis.

NOTE: While submitting paper in this special session, please specify [**Massive IoT Connectivity for Large-Scale Mobile Communications**] at the top (above paper title) of the first page of your paper.

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