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8th International Conference on Innovative Computing and Communication

ORGANISED BY: SHAHEED SUKHDEV COLLEGE OF BUSINESS STUDIES, UNIVERSITY OF DELHI, NEW DELHI IN ASSOCIATION WITH UNIVERSITY OF VALLADOLID SPAIN

On

14-15 FEBRUARY 2025.

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

SPECIAL SESSION ON

Cutting-edge Research and Applications in Data Science, Machine Learning, IoT, and the Metaverse

SESSION ORGANIZERS:

1. **Dr. Divya Agarwal, Assistant Professor, Vivekananda Institute of Professional Studies-Technical campus, Delhi, India, +91-9968362010 (divya.agarwal@vips.edu)**
2. **Dr. Sandhya Tarwani, Assistant Professor, Vivekananda Institute of Professional Studies-Technical campus, Delhi, India, +91-9650295744 (sandhya.tarwani@vips.edu)**

EDITORIAL BOARD: (Optional)

NA

SESSION DESCRIPTION:

In the rapidly evolving landscape of technology, Artificial Intelligence (AI), Machine Learning (ML), the Internet of Things (IoT), and the emerging Metaverse have become essential tools across various industries, including engineering. These advanced technologies are transforming traditional engineering practices, offering innovative solutions, enhancing productivity, and expanding the boundaries of what is possible. This track explores the latest trends in AI, ML, IoT, and the Metaverse within multidisciplinary engineering applications, examining their impact, challenges, and future prospects.

AI and ML have revolutionized engineering by enabling intelligent systems to perform tasks that previously required human intervention. In multidisciplinary engineering, AI algorithms analyze vast amounts of data from diverse sources to provide insights, optimize processes, and make informed decisions. IoT plays a crucial role by connecting devices and systems, allowing real-time data collection and communication, which further enhances the capabilities of AI and ML. Additionally, the Metaverse—a virtual shared space created by the convergence of physical and digital realities—is set to revolutionize multidisciplinary engineering applications. Engineers can use immersive virtual

environments to design, simulate, and visualize complex systems with unprecedented realism and interactivity.

Despite these promising prospects, integrating AI, ML, IoT, and the Metaverse into multidisciplinary engineering applications presents several challenges. Data privacy and security concerns, ethical implications, and regulatory compliance are critical considerations in developing and deploying AI-driven solutions. Issues such as bias and fairness in ML algorithms, data quality and integrity, and the interpretability of AI models require careful attention. Moreover, the complexity of virtual environments in the Metaverse demands robust infrastructure, high-performance computing resources, and seamless integration with existing engineering workflows.

Looking ahead, the convergence of AI, ML, IoT, and the Metaverse holds immense potential to drive innovation and address pressing societal challenges within multidisciplinary engineering applications.

RECOMMENDED TOPICS:

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

- **Metaverse and Virtual Environments**
- **Application of Metaverse**
- **AI/ML in Natural Language Processing, Disaster Management and healthcare**
- **Application of Deep Learning in Large Language Model (LLM)**
- **Machine Learning and AI techniques for Big Data**
- **Advanced data analytics techniques for IoT.**
- **Real-time data processing and stream analytics.**
- **Machine learning models and algorithms for IoT applications.**
- **Edge and federated learning for distributed IoT systems.**
- **Design and implementation of smart cities, smart homes, and smart industries.**
- **Autonomous systems and robotics.**
- **Data security and privacy in IoT environments.**
- **Blockchain and other decentralized technologies for IoT security.**
- **Scalable architectures for large-scale IoT deployments.**
- **Middleware and frameworks for IoT integration.**
- **Healthcare, agriculture, transportation, and other domain-specific applications.**

SUBMISSION PROCEDURE:

Researchers and practitioners are invited to submit papers for this special theme session on **"Cutting-edge Research and Applications in Data Science, Machine Learning, IoT, and the Metaverse"** ***on or before*** **[30th November 2024]**. 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 https://icicc-conf.com/paper_submission. All submitted papers will be reviewed on a double-blind, peer review basis.

NOTE: While submitting paper in this special session, please specify "**Cutting-edge Research and Applications in Data Science, Machine Learning, IoT, and the Metaverse**" at the top (above paper title) of the first page of your paper.

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