8th International Conference on Micro-Electronics, Electromagnetics

and Telecommunications

ICMEET - 2023

<u>OCTOBER 6 - 7, 2023</u>

Organized by

Department of Electronics and Communication Engineering, National Institute of Technology Mizoram, India

GALL FOR PAPERS: SPECIAL SESSION

Special Session on "Revolutionizing RF Signals and IoT with AI and ML"

Session Chair(s):

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Theme of Session:

The main aim of this special session is to explore the integration of Radio Frequency (RF), Internet of Things (IoT), Artificial Intelligence (AI) and Machine Learning (ML) models. In recent years, the rapid advancement of technology has led to a proliferation of connected devices and an exponential growth in the amount of data being generated. This data, often in the form of RF signals, plays a vital role in various applications, particularly in the context of the IoT. To make sense of this vast amount of data and extract valuable insights, the integration of AI and ML models has become increasingly important. AI and ML models have revolutionized many fields by enabling computers to learn from data and make predictions or decisions without



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explicit programming. When applied to RF and IoT, these models offer a powerful means to analyze and interpret complex signals and extract valuable information that can drive intelligent decision-making. The combination of AI and ML with RF and IoT opens up a multitude of possibilities. From improving wireless network performance to enabling intelligent decisionmaking in IoT applications, these models have the potential to unlock new opportunities and transform industries. However, it is important to address challenges such as RF module design, data quality, model interpretability, and computational requirements to ensure the successful deployment and utilization of these models.

Topics of Interest:

We invite original (un-published) research contributions based on the above-mentioned theme including following topics **but not limited to**:

- Antenna and Filter Design
- RF Circuit Design
- RF and Microwave Circuits for Next Generation Communications
- Millimeter wave, THz and UWB propagation
- > Metamaterials
- Antenna Systems for 5G and 6G communications
- RF sensors and systems
- Plasmonics
- Photonic circuits and systems

- Planar arrays, MIMO and Multiband antennas
- Micro-climate monitoring
- Infections & Disease monitoring
- Ground Mapping & sensors
- > Agri-robots & drones
- Autonomous driving in Defence and agriculture
- Disease detection
- Robotic harvesting
- > AI/ML techniques

Paper Submission Process:

Please submit your paper (in word/pdf format) at email: <u>niticmeetrfiotconference@gmail.com</u> with "**Revolutionizing RF Signals and IoT with AI and ML: mentioned in the subject line.**"

Program Committee:

Dr.A.Nageswar Rao, HAL, Hyderabad

Dr Chilaka Mahesh, Airport Authority of India

Dr VSSN Srinivasa Baba, Methodist College of Engineering and Technology, Hyderabad

Dr G Srivalli, G Narayanamma institute of Technology and Science, Hyderabad

M. Vamshi Krishna, Dhanekula Institute of Engg & Tech, Vijayawada

For any further queries related to this special session, please contact the session chairs at:



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