

**Special Session on**  
**Empowering the Future Trends: IoT and Cloud Innovations**  
**in conjunction with**  
**15th World Congress on Nature and Biologically Inspired Computing (NaBIC 2023)**  
**December 12-14, 2023**  
**Website: <http://www.mirlabs.org/nabic23>**  
**Hybrid Mode – Online & Offline**  
**Onsite Venues: <http://mirlabs.org/nabic23/venue2.php>**

### **Objectives and Scope**

The convergence of IoT (Internet of Things) and cloud computing has brought about transformative possibilities across various domains. However, this integration presents intricate technical challenges that necessitate rigorous research efforts. In the realm of IoT, scalability and interoperability remain pivotal concerns as the network of interconnected devices expands. The need for energy-efficient solutions is imperative, driving the exploration of power management techniques for prolonged device operation. Security and privacy are paramount, demanding advanced encryption and authentication protocols to safeguard sensitive data exchanged between IoT devices. Efficient data management and analytics are critical to process the deluge of real-time data generated by these devices effectively. Meanwhile, cloud computing introduces its own set of complexities. The dynamic allocation of resources and scalability to meet fluctuating IoT demands necessitate innovative resource management algorithms. Ensuring data security within multi-tenant cloud environments, where IoT-generated data is stored and processed, is of paramount importance. Additionally, energy efficiency strategies, fault tolerance mechanisms, and high availability solutions are essential to maintain reliable cloud services. Despite these intricate challenges, the amalgamation of IoT and cloud computing yields a myriad of interconnected applications. Smart cities utilize IoT sensors to gather data on traffic, energy consumption, and waste management, which is processed through cloud platforms, analyzed using AI, and then utilized to optimize urban services. Industrial IoT monitors equipment health, with cloud-based AI predicting failures and enhancing production processes. Healthcare leverages wearable IoT devices, transmitting data to the cloud for AI-powered analysis, enabling personalized health insights. These applications exemplify the symbiotic relationship between IoT and cloud computing, emphasizing the need for robust solutions to foster their seamless integration and unleash their transformative potential.

### **Subtopics**

The topics include, but are not limited to:

- Applications of IoT and Cloud Computing
- Types of IoT and Cloud Integrations
- Machine Learning and AI in Cloud Computing

- Cloud Data Management and Analysis
- IoT and Cloud Security
- Cloud Services for IoT
- Different Models of Cloud Computing
- Data Storage and Retrieval
- Energy Efficiency and Sustainability
- Remote Monitoring

### **Paper publications**

- Proceedings will be published in Lecture Notes in Networks and Systems, Springer (<https://www.springer.com/series/15179>)
- Indexed by SCOPUS, INSPEC, WTI Frankfurt eG, zbMATH, SCImago
- Paper maximum length is 10 pages
- Papers must be formatted according to Springer format (Latex/word) available at: <https://www.springer.com/de/authors-editors/book-authors-editors/manuscript-preparation/5636#c3324>
- Submission Link: <https://cmt3.research.microsoft.com/NABIC2023>

### **Important Dates**

Paper submission due: **September 30, 2023**

Notification of paper acceptance: **October 31, 2023**

Registration and Final manuscript due: **November 10, 2023**

Conference Date: **December 13-15, 2023**

### **Special Session Chair(s)**

- **Dr. L. Godlin Atlas**, BIHER, Chennai, India
- **Mr. K. P. Arjun**, GITAM University (Bengaluru Campus), India.
- **Mr. N. M. Sreenarayanan**, GITAM University (Bengaluru Campus), India.

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