INDEA-2026
International Conference on
Next-Generation Data Engineering and Analytics

ORGANISED BY: University of Salford, Manchester, UK

On

21st- 22nd August 2026.

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

SPECIAL SESSION ON

Federated and Privacy-Preserving AI for Next-Generation Data Engineering and Edge Analytics

SESSION ORGANIZERS:

Dr. Suman Mann, Professor [Panipat Institute of Engineering & Technology, Samalkha, India, sumanmann2021@gmail.com]

Dr. Aakanksha Mahajan, Associate Professor [Panipat Institute of Engineering & Technology, Samalkha, India, er.aakanksha@yahoo.co.in]

EDITORIAL BOARD: (Optional)

Dr. Suman Mann [Panipat Institute of Engineering & Technology, Samalkha, India, sumanmann2021@gmail.com]

Dr. Aakanksha Mahajan [Panipat Institute of Engineering & Technology, Samalkha, India, er.aakanksha@yahoo.co.in]

SESSION DESCRIPTION:

This session focuses on the advancement of Artificial Intelligence (AI), distributed computing and data-driven systems reshaping next-generation data engineering and analytics. Federated learning and privacy-preserving AI have emerged as transformative approaches for enabling collaborative intelligence without sharing raw data. When integrated with edge-cloud architectures, these paradigms support scalable, secure and communication-efficient analytics while preserving data confidentiality and trust, particularly in edge-centric environments such as IoT ecosystems, smart cities, healthcare infrastructures, industrial automation and emerging 5G/6G communication networks.

This special session aims to bring together researchers, practitioners and industry experts working at the intersection of:

- Federated Learning and Distributed AI
- Privacy-Preserving Machine Learning

- Edge and Fog Computing
- Secure Data Engineering Architectures
- Trustworthy and Responsible AI
- Intelligent Communication Networks
- Scalable Data Analytics Systems

The session particularly encourages contributions addressing architectural design, algorithmic innovation, system optimization, energy-efficient computing, trust and governance mechanisms, and real-world applications of federated and privacy-aware AI systems in next-generation data engineering environments.

RECOMMENDED TOPICS:

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

- Federated Learning for Large-Scale Data Engineering
- Privacy-Preserving Data Analytics in Edge-Cloud Environments
- Communication-Efficient Distributed AI Training
- Differential Privacy, Secure Aggregation, and Cryptographic Methods
- Edge-Enabled Intelligent Data Processing Architectures
- Federated Learning over 5G/6G and IoT Networks
- Trust, Fairness, and Bias Mitigation in Distributed AI
- Adversarial Robustness in Federated Systems
- Blockchain and Decentralized Trust Mechanisms for AI
- Energy-Efficient and Green AI for Edge Analytics
- Model Compression and On-Device Optimization
- Edge-Cloud Collaborative Intelligence Frameworks
- Data Governance, Regulatory Compliance and Responsible AI
- Applications in Smart Cities, Healthcare, Industrial IoT, Autonomous Systems, and Cyber-Physical Systems

SUBMISSION PROCEDURE:

Researchers and practitioners are invited to submit papers for this special theme session on **Federated and Privacy-Preserving AI for Next-Generation Data Engineering and Edge Analytics** ***on or before*** **30th June 2026.** 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://indea-conf.com . All submitted papers will be reviewed on a double-blind, peer review basis.

NOTE: While submitting paper in this special session, please specify **Federated and Privacy-Preserving AI for Next-Generation Data Engineering and Edge Analytics** at the top (above paper title) of the first page of your paper.

* * * * * *