callforpaper.org

Croatia October 14-17, 2025

CONFERENCE WEBSITE: https://flta-conference.org/flta-2025/

About the Conference

The 3rd IEEE International Conference on Federated Learning Technologies and Applications (FLTA 2025)

https://flta-conference.org/flta-2025/

14-17 October 2025 | Dubrovnik, Croatia

Technically Co-Sponsored by IEEE Croatia Section

The 3rd IEEE International Conference on Federated Learning Technologies and Applications (FLTA 2025) invites researchers, practitioners, and thought leaders from academia and industry to present their latest advancements in federated learning (FL), distributed AI systems, privacy-preserving AI, and Edge-Cloud continuum innovations. As FL transforms traditional centralized machine learning paradigms, FLTA stands as a premier platform to shape its future and foster collaboration among global experts. Join us in pushing the boundaries of decentralized AI and building the next generation of resilient, scalable, and privacy-focused systems. Featuring

Important Dates

OCT 14

CONFERENCE DATE

October 14-17, 2025

leading keynotes, technical sessions, workshops, and networking opportunities, FLTA 2025 offers a vibrant environment for sharing breakthroughs and emerging trends across domains such as healthcare, autonomous systems, IoT, and cybersecurity.

This year’s conference will highlight key themes, including secure model aggregation, adaptive optimization, cross-device learning, real-time applications, and fairness in federated settings, reflecting FL’s expansion across distributed infrastructures. We welcome cutting-edge submissions in theory, algorithms, and applications, focusing on innovative approaches addressing communication efficiency, heterogeneity, privacy, and multi-model collaboration. Whether you are solving challenges in massive-scale FL systems or pioneering new methods for edge deployments, FLTA 2025 is the ideal stage to showcase your work, gain critical insights, and connect with top experts shaping the global FL research landscape.

We look forward to welcoming you to the beautiful city of Dubrovnik and discussing your contributions to push FL research forward and establish its impact in distributed, collaborative intelligence, and Secure AI.

Important Dates

Full Paper Submission Date: June 1, 2025

Short paper/poster due: June 10, 2025
Notification to Authors: July 29, 2025
Camera Ready Submission: 15 August 2025

Topics of interest:

FLTA 2025 welcomes contributions that advance research and innovation in distributed, collaborative, and secure AI systems. Submissions are encouraged from a broad range of interdisciplinary topics, both theoretical and application-driven, including but not limited to:

1. Federated Learning Fundamentals

Novel FL algorithms, architectures, and protocols
Cross-silo and cross-device FL models and applications
Adaptive and personalized federated learning
Optimization and convergence in decentralized systems

2. Distributed and Collaborative Intelligence

Collaborative multi-agent learning systems
Distributed optimization and model training across networks
Federated multi-modal and multi-task learning
Collaborative AI across Edge, Fog, and Cloud computing

3. Privacy-Preserving and Secure AI

Differential privacy in distributed settings
Secure aggregation and cryptographic techniques for FL
Trusted execution environments and secure enclaves
Threat detection and adversarial robustness in FL

4. Data Heterogeneity and Distribution Challenges

Handling non-IID data distributions and statistical heterogeneity
Vertical, horizontal, and hybrid federated learning across distributed datasets
Imbalanced, sparse, or missing data in FL settings
Data partitioning strategies and their impact on model performance

5. Communication Efficiency and Scalability

Model compression, quantization, and scarification
Asynchronous and hierarchical federated learning
Resource-aware FL on edge devices
Dynamic system resource management and orchestration

6. Edge-Cloud Continuum and Heterogeneous Systems

FL in resource-constrained environments (IoT, mobile, and wearable devices)
Edge-native AI: training and inference optimization at the edge
Hybrid edge-cloud frameworks for collaborative AI

Heterogeneous FL across diverse hardware and networks

7. Fairness, Bias, and Anomaly Detection in Federated Learning

Algorithmic fairness and bias mitigation in federated environments
Detection and correction of biased data distributions across clients
Federated anomaly detection algorithms for decentralized data
Addressing fairness issues in non-IID and imbalanced datasets
Real-time anomaly detection for secure and robust FL systems
Adaptive models for identifying adversarial clients or poisoned data

7. Real-world applications and Domain-Specific Implementations

FL applications in healthcare, finance, autonomous systems, and smart cities
Privacy-aware FL in personalized medicine and genomics
Federated recommender systems and collaborative filtering
Secure and scalable FL for large-scale IoT networks

8. Cross-Disciplinary and Emerging Trends

FL integration with blockchain and decentralized ledgers
Federated reinforcement learning and adaptive

decision-making
Explainability and interpretability in federated models
Collaborative robotics and multi-agent coordination

We also encourage submissions exploring cross-sector collaborations, case studies, and experimental results demonstrating distributed AI's effectiveness in real-world scenarios.

General Chairs

* Peter Richtarik, KAUST, Saudi Arabia

* Sebastián Ventura, University of Cordoba, Spain

Steering Committee Chairs

* Omer Rana, Complex Systems research group, Cardiff University, United Kingdom

* Tarik Taleb, Ruhr University Bochum, Germany

* Manuel Roveri, Politecnico di Milano, Italy

* Schahram Dustdar TU Wien, Austria

Contact:

Please send any inquiry on FLTA to Sadi Alawadi: sadi.alawadi@bth.se

For general questions and sponsorships: Feras Awaysheh: feras.awaysheh@umu.se

For workshops: addi.ait-mlouk@his.se

For keynote and speech: fahed.alkhabbas@mau.se

TOPICS OF INTEREST

3 topics

Research papers are invited in, but not limited to, the following areas:

- Uncategorized
- Cybersecurity & Privacy
- Artificial Intelligence & Machine Learning