



**IEEE World Congress on  
Computational Intelligence**  
June 30 – July 5, 2024



INTERNATIONAL NEURAL NETWORK SOCIETY



# CALL FOR PAPERS

## IMPORTANT DATES

**15 November 2023**  
Special Session & Workshop  
Proposals Deadline  
**15 December 2023**  
Competition & Tutorial  
Proposals Deadline  
**15 January 2024**  
Paper Submission Deadline  
**15 March 2024**  
Paper Acceptance  
Notification  
**1 May 2024**  
Final Paper Submission &  
Early Registration Deadline  
**30 June – 5 July 2024**  
IEEE WCCI 2024  
Yokohama, Japan

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## Trustworthy Federated Learning: in the Era of Foundation Models

**IJCNN 2024** The International Joint Conference on Neural Networks (IJCNN) covers a wide range of topics in the field of neural networks, from biological neural networks to artificial neural computation.

### Special Session Abstract

Federated Learning (FL) is an emerging machine learning paradigm that allows multiple end-users to collaboratively train models without sharing their private data. Existing FL frameworks are undergoing a significant change fueled by Foundation Models (FM), which presents a unique opportunity to unlock new possibilities, challenges, and applications in AI research. A robust, trustworthy FL platform can be established by examining the interplay between FL and FM, allowing them to benefit each other mutually. Also, it is necessary to overcome potential challenges incurred by original heterogeneity issues, high communication and computations costs, and privacy and security issues in FL.

This special session on trustworthy FL aims to explore recent advances in the intersection of the FM and FL, inspiring future research that can enhance both fields and propel the development of trustworthy AI systems. The session welcomes contributions on all aspects of trustworthy FL, with a special focus on its intersection with foundation model.

### Topics of Interest

- Algorithmic Advances, Novel Issues, and Open Challenges in FL
- Theoretical Analysis for Trustworthy FL
- Advancing Trustworthy FL for FM
- Robustness and Reliability for Trustworthy FL
- Improving FM with Decentralized Data
- Heterogeneity in FL and FM
- Fairness of FL and FM
- Interpretability and Explainability of FL and FM
- Personalized FL based on FM
- FL Trust Policy and Strategies
- Performance Evaluation Methods, Metrics of FL Systems
- Tools and Resources (e.g., Benchmark Datasets, Software Libraries, ...)
- Security and Privacy of FL for FM (e.g., Differential Privacy, Adversarial Attacks, etc.)
- Applications of FL (e.g., Healthcare, Edge Devices, Advertising, Social Networks, etc.)