

# FLTA 2023 Conference Program

## Technical Session 4 (10:00 AM - 12:00 PM)

- Federated Ensemble YOLOv5 - A Better Generalized Object Detection Algorithm

Vinit Hegiste, Tatjana Legler and Martin Ruskowski

- Federated Bayesian Network Ensembles

Florian van Daalen, Lianne Ippel, Andre Dekkers and Inigo Bermejo

- Hyperparameters Optimization for Federated Learning System: Speech Emotion Recognition Case Study

Kateryna Mishchenko, Samaneh Mohammadi, Mohammadreza Mohammadi and Sima Sinaei

- Towards Energy-Aware Federated Traffic Prediction for Cellular Networks

Vasileios Perifanis, Nikolaos Pavlidis, Selim Yilmaz, Francisc Wilhelmi, Elia Guerra, Marco Miozzo, Pavlos Efraimidis,

Paolo Dini and Remous-Aris Koutsiamanis

- RegAgg: A Scalable Approach for Efficient Weight Aggregation in Federated Lesion Segmentation of Brain MRIs

Muhammad Irfan Khan, Esa Alhoniemi, Elina Kontio, Suleiman A. Khan and Mojtaba Jafaritadi

## 12:00 - 1:30 PM Lunch Break

## Keynote 3 (1:30 - 2:30 PM)

Chair(s): Feras Awaysheh

- Immersive Media and Massive Twinning: Advancing Towards the Metaverse

Speaker: Mérouane Debbah

## Technical Session 5 (FLTA) (2:30 - 3:30 PM)

Chair(s): Vinit Hegiste, Feras Awaysheh

- Federated Learning for Early Dropout Prediction on Healthy Ageing Applications

Christos Chrysanthos Nikolaidis, Vasileios Perifanis, Nikolaos Pavlidis and Pavlos Efraimidis

- Federated Object Detection for Quality Inspection in Shared Production

Vinit Hegiste, Tatjana Legler, Kirill Fridman and Martin Ruskowski

- Histogram-Based Federated XGBoost using Minimal Variance Sampling for Federated Tabular Data

William Lindskog, Christian Prehofer and Sarandeep Singh

### 3:30 - 4:00 PM Coffee Break

## Technical Session 6 (FLTA) (4:00 - 6:00 PM)

Chair(s): Louis Leconte, Feras Awaysheh

- An Investigation of Recent Backdoor Attacks and Defenses in Federated Learning

Qiuxian Chen and Yizheng Tao

- Enabling on-demand Crowdsourced Federated Learning Over IoT

Mehreen Tahir and Muhammad Intizar Ali

- Label-Aware Aggregation for Improved Federated Learning

Ahmad Khalil, Aidmar Wainakh, Ephraim Zimmer, Javier Parra-Arnau, Antonio Fernandez Anta, Tobias Meuser and Ralf Steinmetz

- Federated Boolean Neural Networks Learning

Louis Leconte, Van Minh Nguyen and Eric Moulines

- Federated Learning Showdown: The Comparative Analysis of Federated Learning Frameworks

Sai Praneeth Karimireddy, Narasimha Raghavan Veeraragavan, Severin Elvatun and Jan Franz Nygård

- Communication Topologies for Decentralized Federated Learning

Michael Dötzer, Yixin Mao and Klaus Diepold