Euromicro Workshop on Machine Learning Driven Technologies and Architectures for Intelligent Internet of Things (ML-IoT)

August 28, 2018| Prague | Czech Republic

SCOPE

The Internet of Things (IoT) and Artificial Intelligence (AI) tsunami are affecting every aspect of our daily lives, ranging from smart cars, smart buildings, smart cities, to smart health, and smart environments. While everything is getting smarter and connected, interdisciplinary landscape of IoT demands researchers from different areas such as Machine Learning (ML), distributed computing, embedded systems, and big data to synergize their efforts in better understanding the untapped opportunities to produce highly efficient, deployable, intelligent ML-driven IoT systems. In this context, in close collaboration with Digital System Design (DSD) and Software Engineering and Advanced Applications (SEAA), Euromicro organizes the first International Workshop on Machine Learning (ML) Driven Technologies and Architectures for Intelligent Internet of Things (ML-IoT) to promote research and technology transfer in this important cutting-edge field. This workshop intends to address all aspects of intelligent IoT from Device, to Edge/Fog and Cloud, covering the design of circuits, architecture, network, cloud, cross-layer intelligence, big data, applications, as well as human-machine interaction. ML-IoT also discusses the associated challenges that need to be overcome for achieving the goal of accuracy, privacy, reliability and security.

Authors from both academia and industry are kindly invited to submit their original work according (but not limited) to the topics of the workshop. All papers are reviewed following guidelines, quality requirements and thresholds that are common to all Euromicro conferences including DSD and SEAA.

Extended versions of selected best papers will be published in a special issue of the ISI indexed Euromicro/Elsevier journal "Microprocessors and Microsystems: Embedded Hardware Design" (MICPRO) having the 2016 Impact Factor as high as 1.025. It should also be noted that the workshop participation fee will be much reduced for the DSD'2018 and SEAA'2018 participants.

SUBMISSION GUIDELINES

Authors are encouraged to submit their manuscripts via Easychair web service at web page https://easychair.org/conferences/?conf=mliot2018. Should an unexpected web access problem been countered, please contact the Dr.-Ing. Farshad Firouzi by email (mliot2018@easychair.org). Each manuscript should include the complete paper text, all illustrations, and references. The manuscript should conform to the IEEE format: single spaced, double column, US letter page size, 10-point size Times Roman font, up to 6 pages. In order to conduct a blind review, no indication of the authors' names should appear in the manuscript, references included. EUROMICRO will publish accepted papers in a dedicated proceeding and the selected papers will be published in a special issue of the ISI indexed Elsevier journal "Microprocessors and Microsystems: Embedded Hardware Design" (MICPRO) having the 2016 Impact Factor as high as 1.025.

IMPORTANT DATES

Deadline for paper submission: June 1st
Notification of acceptance: June 14th
Camera ready papers: June 25 th

MAIN TOPICS

In the context of ML-driven IoT, topics of interest include, but are not limited to:

- Nano-CMOS and beyond-CMOS devices, sensors, and circuits for IoT
- Sub-and near-threshold computing in the IoT regime
- Reconfigurable embedded sensing and actuating, enabling runtime selection of quality, operation mode and parameter settings of IoT devices
- Alternative architectures for IoT-specific Big Data search, predictive analytics, deep learning, high dimensional data, feature selection, and feature transformation
- Accelerators for IoT (e.g., learning, neuromorphic and cognitive computing)
- Cognitive Internet of Things Assisted by Cloud Computing and Big Data
- Intelligent Sensing and Applications for Cyber-Physical Systems
- IoT-specific approximate architecture and micro-architecture design, exploration and optimization
- Brain-inspired and neuromorphic components, circuits, and systems for IoT
- SoC design for Artificial Intelligence and Machine Learning in the era of IoT
- Machine learning for IoT signal processing on edge devices
- Neural network model compression for wearables
- Information-theoretic signal learning on IoT devices
- Edge-based machine learning for wearable solutions

- Fog computing for mobile-based location search; context-aware, information processing
- Blockchain and Decentralization for Internet of Things
- Scalability, privacy and usability aspects of ML-focused IoT
- Data analytics for cybersecurity such as Predictive Cybersecurity, and Event Analysis
- Intelligent Security and Optimization in Edge/Fog Computing
- Design, development and evaluation of fog architectures for data analysis, visualization and interoperability for intelligent IoT
- Big data storage in IoT and Edge Computing
- Machine Learning Driver for Cyber Security and Biometrics in the IoT Era
- Fusion for different services and its impacts in the IoT era
- ML-driven IoT Architecture
- Microservices Architectures in the era of Machine Learning IoT
- Big Data and Advanced Data Analytics
- Intelligent Algorithms and Standards for Interoperability in Internet of Things
- Machine Learning for smart data storage in cloud-based Internet of Things
- Intelligent algorithms for cloud-based Internet of Things
- Case-based reasoning in cloud-based Internet of Things
- Cognitive aspects of Machine Learning in cloud-based Internet of Things
- Case studies of successful IoT systems (eHealth, Smart City, etc.)

GENERAL CHAIR

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