



AAMTM/DSD 2023

Durres, Albania, 6-8 September, 2023

<https://dsd-seaa2023.com/aamtm/>

AAMTM: Applications, Architectures, Methods and Tools for Machine – and Deep Learning

Machine learning has numerous important applications in intelligent systems within many areas, like automotive, avionics, robotics, health-care, well-being, and security. The recent progress in Artificial Intelligence (AI), and particularly in Deep Learning (DL) / Machine Learning (ML), has dramatically improved the state-of-the-art in object detection, classification and recognition, natural language processing, games, medical imaging, etc. However, the complexity of DL-networks for many practical applications can be huge, and their processing may demand a high computing effort and excessive energy consumption. This can become a gigantic challenge when considering embedded inference implementation for Smart Cyber Physical Systems (like autonomous vehicles and robotics) and Internet-of-Things (like healthcare-IoT and predictive maintenance for Industry 4.0). Moreover, even training of such complex DL-networks over massive data sets is triggering new avenues in training accelerator design. In DSD 2023, we plan to organize several oral sessions on embedded deep learning/AI and related research, as well as to have invited speeches and a poster session.

Important Dates:

- **Paper Submission Deadline: April 17th, 2023**
- Notification of Acceptance: May 29th, 2023
- Camera-Ready Papers: June 16th, 2023

Special Session Chairs

- Tomasz Kryjak (*AGH University of Science and Technology in Krakow, Poland*)
- Niki Martinel (*University Udine, Italy*)
- Ercan Kalali (*TU Eindhoven, The Netherlands*)

Special Session Scope

We welcome submissions related to advanced applications, architectures, design methods and tools, and system software for AI, ML and DL, especially related (but not limited) to the following topics:

- Architectures for ML and DL, with emphasis on energy reduction, computation efficiency and/or computation flexibility, both for inference and/or for learning
- Neuromorphic architectures, Spiking and brain-inspired neural networks and their implementation
- Efficient Edge Computing for ML and DL
- Efficient mapping of ML and DL applications to target architectures, including many-core, GPGPU, SIMD, FPGA, and HW accelerators
- New learning approaches for ML and DL, with emphasis on e.g. faster and more efficient learning, online learning, and quality of learning, training accelerators, etc.
- High-level programming language support for ML and DL
- Advanced applications exploiting ML or DL
- ML and DL for design automation
- Tools, frameworks, and system software for ML and DL
- Using of approximate computing to decrease the energy demands of ML and DL
- Security and Reliability issues for ML and DL, for both inference and training

Submission Guidelines

Authors are encouraged to submit their manuscripts via EasyChair web service at web page <https://easychair.org/conferences/?conf=dsd2023>. 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 8 pages. In order to conduct a blind review, no indication of the authors' names should appear in the manuscript, references included.

Venue

University of Aleksandër Moisiu Durrës (UAMD), Faculty of Information Technology, Durres, Albania

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Special Session Program Committee

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