INTERNATIONAL

INVITED SESSION SUMMARY

Title of Session:

Signal Processing and Edge AI Algorithms for Embedded Systems and Sensors

Name, Title and Affiliation of Chair:

Chair: Prof. **Paolo Crippa**,
Department of Information Engineering, Università Politecnica delle Marche, Ancona, Italy

Co-Chair: Prof. **Giorgio Biagetti**,
Department of Information Engineering, Università Politecnica delle Marche, Ancona, Italy

Details of Session (including aim and scope):

The design of many automated identification, classification, and in general intelligent embedded systems often requires advanced signal processing algorithms coupled with artificial intelligence modules, tailored to the resource-constrained environment. In these electronic systems input data is typically acquired using wireless sensors, the representation of the acquired data is then obtained using feature extraction algorithms, and finally a decision is made based on feature vectors. Particular interest is aimed at automated systems based on machine learning, such as medical and healthcare decision-making systems (based on ECG, EEG, sEMG, PPG signals or on virus sensing), active and assistive living systems, speech, gesture and face recognition systems, industrial quality control systems.

This session aims to present original and unpublished results on recent advances in signal processing algorithms and artificial intelligence applications for automated identification/classification systems. The suggested but not limited scope of the session includes the following topics:

- Healthcare applications of machine learning.
- Industrial and medical applications of machine learning.
- ECG, EEG, sEMG, PPG based recognition systems.
- Healthcare applications, such as sensor-based behavior analysis, human activity recognition, active and assisted living, disease prediction, rehabilitation.
- Biomedical signal processing, and data monitoring.
- Gesture recognition.
- Face recognition.
- Speech/speaker recognition.
- Artificial intelligent techniques and recognition.
- Machine learning applications for embedded systems.
- Neural networks.
- Statistical pattern recognition.
- Parallel and distributed pattern recognition.
- Dimensionality reduction.
- Signal processing and analysis.
- Special hardware architectures.
- Embedded systems.

Not only theoretical papers but also practical application papers will be welcome.

Submissions for the conference must be made as complete papers (there is no abstract submission stage) submitted as PDF documents through the EasyChair online submission and review system.
The guide length for full papers is 8 to 10 pages (maximum).
Follow the KES 2026 guidelines for more information on paper submission.

Publication:
Full papers will be reviewed by the IPC and if accepted and presented, they will be published in Elsevier's **Procedia Computer Science** open access journal, available in **ScienceDirect** and submitted to be indexed/abstracted in **CPCI (ISI conferences and part of Web of Science), Engineering Index**, and **Scopus**.

Authors of selected papers may be invited to submit extended versions of their papers for publication as full journal papers, for example in the KES Journal or other journals.

Important dates:

- Submission of papers: **4th May 2026.**
- Notification of acceptance: **20th May 2026.**
- Final paper publication files to be received by: **1st June 2026.**

- Conference: Dublin, Ireland, 9-11 September 2026.

Main Contributing Researchers / Research Centres (tentative, if known at this stage):

Website URL of Call for Papers (if any):

Email & Contact Details:

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