



International

*Innovation in Knowledge Based and Intelligent
Engineering Systems*



INVITED SESSION SUMMARY

Title of Session:

Artificial Intelligence, Sustainability and Green algorithms

Name, Title and Affiliation of Chair:

Amparo Alonso-Betanzos, Full Professor
Verónica Bolón-Canedo, Associate Professor
Óscar Fontenla-Romero, Full Professor
Bertha Guijarro-Berdiñas, Associate Professor

Details of Session (including aim and scope):

The incorporation of Artificial Intelligence (AI) into all areas of society is among the great challenges that we are facing nowadays. Especially after the Co-Vid 19 pandemic, its relation to sustainability stand out, as this will be one of the pillars of the future. We are referring to sustainability in a broad sense that is, to the use of AI applied to environmental aspects, but also to energy, economy and social perspectives. Moreover, AI itself should also pursue sustainability in massive data handling and processing, as well as in the consumption of machine learning algorithms.

In this special session, we aim at studies showing the use of AI for innovative and perhaps multidisciplinary solutions that address smart and sustainable growth, new tools for prevention, alert and emergency management, mobility management, reliable and energy efficient processes, sustainable land management, and models of social innovation, among others.

In addition to this, the development of AI algorithms that have at their core the idea of being sustainable from an energy and environmental point of view is also of great interest.

Thus, topics such as low-resolution algorithms, edge computing, efficient platforms, and in general scalable and sustainable algorithms and their applications are also of interest to complete a holistic view of Sustainability and Artificial Intelligence.

We invite papers on both practical and theoretical issues about sustainability, artificial intelligence and green algorithms, as well as review papers with the state-of-the-art techniques and the open challenges encountered in this field. In particular, topics of interest include, but are not limited to:

- Development of artificial intelligence applications to sustainability, including environmental aspects, energy, economy and social perspectives.
- Green computing for big data learning
- Development of energy-efficient artificial intelligence algorithms
- Green algorithms for IoT and computation on the edge
- Low-power circuits and energy-oriented algorithms for parallel computing
- Green practices in artificial intelligence
- AI and the 2030 Agenda for Sustainable Development

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

University of A Coruña
University of Groningen
James Hutton Institute
University of Manchester

Website URL of Call for Papers (if any):**Email & Contact Details:**

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