Special Issue

Intelligent Automation: Bridging Artificial Intelligence and Automation

Message from the Guest Editors

Intelligent automation (IA) represents the convergence of artificial intelligence and traditional automation technologies to create systems that can learn, adapt, and execute complex tasks with minimal human intervention.

IA systems incorporate feedback loops that continuously refine performance. Machine learning algorithms analyze outcome data—such as processing times or throughput—and adjust decision parameters over time. Their self-optimizing nature means that IA deployments grow increasingly efficient and accurate, unlocking higher levels of productivity and customer service. By adding machine learning, natural language processing (NLP), and computer vision to classic automation, IA can handle tasks that traditional systems cannot deal with.

This Special Issue on intelligent automation welcome contributions across a large spectrum of areas of AI in automation, e.g., AI in control, AI in optimization, AI in manufacturing systems, AI in process automation and monitoring, AI in energy systems, AI in the healthcare industry, and any other area that may be compassed by the scope of the Special Issue topic.

Guest Editors

Prof. Dr. João Miguel da Costa Sousa

Department of Mechanical Engineering, IDMEC, Instituto Superior Tecnico, Universidade de Lisboa, 1049-001 Lisboa, Portugal

Dr. Susana Vieira

Departamento de Engenharia Mecânica, Instituto Superior Técnico, Universidade de Lisboa, 1049-001 Lisbon, Portugal

Deadline for manuscript submissions

30 December 2025

Automation

an Open Access Journal by MDPI

**Impact Factor 2.0
CiteScore 4.1**

mdpi.com/journal/
automation

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Automation (ISSN 2673-4052) is a international peer-reviewed open access journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of automation and control system. Both experimental and theoretical papers are published, including all aspects of manufacturing systems, energy management systems, aerospace control systems, micro- and nano-systems, learning systems, intelligent control systems and so on. Automation organizes Special Issues devoted to specific automation and controlling areas and applications each year.

Editor-in-Chief

Prof. Dr. Eyad H. Abed
Department of Electrical and Computer Engineering and the Institute for Systems Research, University of Maryland, College Park, MD 20742, USA

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