Call for Papers for a Thematic Issue on:

Applications in Integrated Intelligent Infrastructures

The convergence of several recent trends, such as the Internet of Things, massive machine connectivity, edge computing, and artificial intelligence, is enabling smart or intelligent infrastructures. In the latter, daily life objects are equipped with embedded, network-capable devices, including sensors and actuators. Such devices allow to monitor the physical world, process the collected data, make decisions (whenever suitable) by humans and/or technology systems, and perform optimal actions back on the physical world. As a result, smart infrastructures support advanced applications, allowing to enhance human-machine partnering, resource management, process efficiency, and human life quality, in virtually any domain.

Smart infrastructure examples comprise human-systems integration, smart cities, smart homes, smart buildings, smart hospitals, smart grids, smart utility networks, smart communities, smart transportation systems, smart factories, smart agriculture, among many other smart environments. Reports project that the number of IoT connected devices is expected to double from 2022 to 2027.

This special issue aims at attracting high quality submissions on current trends or novel developments on applications in and around smart infrastructures or related topics.

Potential topics of interest include, but are not limited to, advanced applications in:

- Intelligent infrastructure systems: intersecting the physical and digital, human-machine infrastructure interactions, human-system team interactions, infrastructure and artificial intelligence, etc.

- Internet of Things (IoT) devices: ubiquitous data collection and processing, sensors, wearable or other seamless data collection technologies
- Human-technology systems infrastructure: human-systems integration, human-technology interactions, human-machine partnerships, socio-technical infrastructure systems
- Smart cities: edge to cloud systems, public infrastructure network nodes, street lighting, energy, pollution monitoring, water systems, climate change, resiliency and infrastructure, etc.
- Smart homes: ambient assisted living, home safety, e-health, etc.
- Smart buildings: intelligent or cognitive infrastructure, energy management, etc.
- Smart, safe and secure communities: smart grids, utilities, energy systems, etc.
- Smart factories: worker safety applications, machinery monitoring, product quality monitoring, etc.
- Smart hospitals: patient monitoring, digital twins for healthcare, etc.
- Smart transportation systems: traffic monitoring, intelligent traffic management, safety applications, etc.
- Smart agriculture: precision agriculture, smart sensing for agriculture, etc.
- Virtual/mixed reality and infrastructure: digital twins, modeling, virtual reality, augmented reality, metaverse, physical and digital interactions, etc.

Important dates

Submission Deadline (Full Paper): 15.01.2023
First Review Decision: 01.04.2023
Deadline for Reviewed Manuscripts: 01.06.2023
Final Decision: 01.07.2023
Publication: September 2023

Notes for authors

Contributions must be at least 12 pages in length. Submitted manuscripts should not have been previously published nor be currently under consideration for publication elsewhere. Conference papers may be submitted if the paper has been rewritten and expanded to at least 30% (proofs to be included in the cover letter), and, if appropriate, written permissions must have been obtained from any copyright holders of the original paper. For preparation of your manuscript, you may follow the instructions at iospress.com/catalog/journals/journal-of-ambient-intelligence-and-smart-

environments#author-guidelines. When submitting the manuscript, authors should indicate the title of the Thematic Issue in the cover letter.

Guest editors

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Short bio:

Carles Gomez received his Ph.D. from Universitat Politècnica de Catalunya (UPC) in 2007. He is an associate professor at the same university. He is a co-author of numerous technical contributions including papers published in journals and conferences, IETF RFCs, and books. His current research interests focus mainly on the Internet of Things. He serves as an editorial board member of several journals. He is also an IETF 6Lo working group chair.

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Short bio:

Dr. Bannan's work centers on leveraging emerging technologies, learning science, user experience design, and human-machine partnership interactions to inform both the human system and the smart technology system. This reciprocal learning cycle positions the technology system to become an intelligent observer with insights to inform the

human system which then adapts and takes action to promote learning across both systems. Working on these efforts across multiple workforce learning contexts, she co-leads the Center for Advancing Human-Machine Partnerships that supports transdisciplinary research related to complex human-machine partnerships with automated, artificial intelligence integrated with human systems in the most appropriate, ethical, and trusted ways. Her current research has been applied to first responder team-based live simulation training with intelligent sensor-based, instructional support systems leveraging mobile behavioral analytics, and machine learning.

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Short bio:

Anthony Fleury received a PhD in computer sciences from University of Grenoble (France) in 2008 and an accreditation to supervise research in 2019 from University of Lille. He is associate professor at IMT Nord Europe, in Douai (France) since 2009. His research interests cover different application of signal processing and classification techniques to understand and interpret human activity in smart environments (that can be smart home to monitor the evolution of the health of the person or for instance vision in autonomous train to improve the safety of the travelers).