

Special Issue

Emerging Cyber-Physical Systems for Industry 5.0

Message from the Guest Editors

Cyber-physical systems (CPSs) are evolving rapidly, propelled by transformative advances in hardware, software, sensing, connectivity, artificial intelligence, and systems engineering. These emerging technologies and methodologies are not only enhancing performance but enabling a fundamentally new generation of CPS—designed to interact seamlessly with humans, adapt intelligently to their environments, and contribute meaningfully to the complex needs of Society 5.0 and Industry 5.0. This Special Issue focuses on the design, development, and deployment of next-generation CPSs that are human-centric, creative, and resilient. These systems are expected to operate in rich socio-technical environments, supporting applications that go beyond automation—enabling emotional awareness, co-creation, and collaborative intelligence. In this context, special attention is given to CPSs that can engage with emerging trends such as the feeling economy, where emotional intelligence and affective computing become integral to system design and human-machine collaboration.

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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