

Sensors and Materials

Special Issue on Advances in Sensors and Computational Intelligence for Industrial Applications

Call for Papers

Artificial intelligence (AI) is revolutionizing the way computers perceive and interpret their environment, while sensor technologies have emerged as a rapidly expanding interdisciplinary field. Recent advancements have propelled the widespread adoption of computational intelligence (CI) across various industries. CI, a branch of computer science inspired by human brain processes, employs integrated approaches to address complex real-world challenges. It encompasses methodologies for investigating, simulating, and analyzing intricate phenomena.

This Special Issue (SI) on Advances in Smart Sensors and Computational Intelligence for Industrial Applications is aimed at exploring technologies for effective sensing of the physical world and intelligent processing techniques for sensed data, which are critical for the advancement of AI in the context of the Internet of Things (AIoT). Despite significant progress in sensor information fusion, sensor networks and information fusion fields continue to evolve through the incorporation of CI and learning-based fusion techniques, innovative system architectures, data analysis methods, and message control algorithms.

In recent years, there has been a growing demand for portable and lightweight sensors across diverse sectors, including consumer electronics, biomedical engineering, and defense. This SI will highlight cutting-edge research utilizing CI in industrial applications. We invite original, unpublished papers that contribute theoretical insights or practical applications within the scope of this SI. The goal of this SI is to present state-of-the-art research on the application of CI in industrial contexts. We welcome submissions addressing theoretical studies and practical applications alike. All submitted papers will undergo rigorous peer review by at least two independent experts to evaluate their relevance, technical quality, scholarly contribution, and presentation.

Scope: (including but not limited to)

1. CI techniques for sensor information fusion.
2. Learning-based fusion techniques.
3. Applications of CI in consumer electronics, biomedical engineering, and the military.
4. Future trends and emerging technologies in CI and smart sensors.
5. CI techniques for consumer electronics and smart home devices.
6. CI in integrating and analyzing multisensor data for better decision making.
7. Sensors and CI are used in applications such as security, navigation, and automation.
8. CI techniques for AIoT and smart city solutions enhance sustainability, energy efficiency, and urban living.

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Important Dates:

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Tentative publication schedule: Spring 2025

Journal website: <https://myukk.org/>

Submit to: Online Manuscript Submission System (<https://myukk-org.ssl-xserver.jp/form/>)

If you have any questions, please feel free to contact the editorial staff at the address below.

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