



Smart Manufacturing based on Sensing Technology: Digital Twin, Artificial Intelligence and Human–Robot Collaboration

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Message from the Guest Editors

Dear Colleagues,

The integration of cutting-edge sensing technologies in the contemporary manufacturing landscape has led to the emergence of smart manufacturing, emphasizing the seamless integration of physical and digital systems for enhanced efficiency and innovation. This integration has facilitated transformative advancements in digital twin implementations, artificial intelligence applications, and the promotion of effective human–robot collaboration in modern manufacturing environments. Digital twin technologies simulate and optimize manufacturing processes, enhancing productivity, while artificial intelligence empowers proactive process optimization. Sophisticated human–robot collaboration strategies redefine manufacturing boundaries, fostering a collaborative ecosystem where human expertise and robotic precision work in tandem to ensure enhanced safety and productivity.

This Special Issue invites researchers, academicians, and industry practitioners to contribute to the discourse on "Smart Manufacturing based on Sensing Technology: Digital Twin, Artificial Intelligence, Human-Robot Collaboration."





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Message from the Editor-in-Chief

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