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Intelligent Sensors for Fault Diagnosis and Robot Control

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Message from the Guest Editor

Autonomous robotic systems (ARS) have been extensively applied for many practical applications that are either too dangerous or unsuitable for humans. Many advanced navigation, sensing and communication functionalities are needed for ARS to achieve autonomy and intelligence. The complexity and interdependence of these elements introduces new weaknesses within robotic systems, making them fragile and vulnerable to external attacks. Extreme disturbances from dynamic environments can cause system failures, leading to physical system damage, intelligence leakage and even the endangerment of human lives. Unfortunately, the development of resiliency and safety technologies to ARS is not keeping pace with their growth rate and demand. Therefore, new sensors, as well as control design techniques and methodologies, are urgently needed to enhance the safety and reliability of this emerging key enabling technology. Therefore, this Special Issue aims to gather original research and review articles on the recent advances, technologies, solutions and applications of new sensors for fault diagnosis and control, in order to increase the resilience, robustness and safety of robotic systems.



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Special Issue



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Message from the Editor-in-Chief

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