Special Issue

Intelligent Robotics and Autonomous Systems for Challenging Environments

Message from the Guest Editors

Challenging environments are generally referred to as environments which are unknown, unstructured, dynamic, cluttered, hazardous, expansive, or resource-constrained (such as lack of GPS and communications and hindered visibility). The development of robotic and autonomous systems (RAS) for these environments is an ongoing challenge. Intelligent robotics and autonomous systems (iRAS) are playing an increasingly important role in challenging and extreme environments that are physically remote, unreachable or dangerous for humans. As such, iRAS are often deployed in place of humans and must have greater capabilities to fulfil their roles than systems that can work alongside humans. To date, a diverse range of robotic technologies have been developed for challenging environment applications. However, we are still far from an era where robots will possess sufficient levels of intelligence and autonomy to perform tasks fully unsupervised and with human-level skills in these environments. The issue is calling for cutting-edge contributions to fundamental research in the area of iRAS and ground-breaking applications in industries.

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Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guest-edited by leading experts in selected topics of interest.

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