# Special Issue

# Advances in Multimodal Data Fusion, Al, Machine Learning, and Robotics for Inspection, Fault Diagnosis, and Real-Time Solutions in Challenging Environments

### Message from the Guest Editors

In an era defined by rapid technological advancement, the integration of AI, machine learning, computer vision, and robotics has ushered in a new age of innovation, especially in challenging environments. This Special Issue is dedicated to the exploration of cutting-edge research and development in the areas of multimodal data fusion, AI, machine learning, computer vision, and robotics, with a particular focus on but not limited to their applications in subsea inspection, fault diagnosis, underwater mapping, navigation, object detection, semantic segmentation, behavioural analysis, 3D reconstruction, depth estimation, and real-time solutions. This Special Issue aims to bring together leading researchers, engineers, and experts from around the world to contribute their research articles, reviews, and pioneering insights. Our objective is to advance our comprehension of AI, machine learning, multimodal data fusion, computer vision, robotics, realtime solutions, and embedded systems. We invite you to join us in this exciting journey. Share your research, your perspectives, and your vision for the future of technology in challenging environments.

### **Guest Editors**

Dr. Ali Rohan

Dr. Md Junayed Hasan

Dr. Kannan Somasundar

### **Deadline for manuscript submissions**

closed (15 June 2024)



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### Message from the Editor-in-Chief

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 guestedited by leading experts in selected topics of interest.

### Editor-in-Chief

Prof. Dr. Flavio Canavero

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