Special Issue

2D/3D Industrial Visual Inspection and Intelligent Image Processing

Message from the Guest Editors

In recent years, online and onsite optical metrology techniques have received extensive attention for many dimensional control research and industrial applications. This Special Issue focuses on the advancements and applications of 2D and 3D industrial visual inspection and intelligent image processing technologies. With the increasing demand for automation, precision, and efficiency in industrial settings, visual inspection has become a cornerstone for quality control, defect detection, and dimensional measurement. This issue explores state-of-the-art methods for 2D and 3D measurement, visual inspection, and real-time analysis powered by artificial intelligence, machine learning, and computer vision. Topics include innovative approaches to defect detection, metrology, image processing, along with their integration into smart manufacturing systems. The technical scope of this Special Issue includes, but is not limited to, the following:

- 2D and 3D optical metrology techniques;
- Intelligent image processing;
- Accuracy and efficiency improvements for optical metrology;
- Vision detection or 3D reconstruction using UAV;
- Robot-integrated optical metrology systems;

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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 guest-edited by leading experts in selected topics of interest.

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