

Special Issue

Application of Artificial Intelligence and Computer Vision for Detection and Analysis

Message from the Guest Editors

Nondestructive testing, represented by X-ray, ultrasonic, thermography, etc., and machine vision testing, represented by photoelectric testing, are important technologies for defect detection and quality control in the manufacturing and service process of complex products, such as aerospace, petrochemical, special equipment, etc. With the rapid improvement in the automation and informatization of current testing instruments, industry has accumulated a large amount of testing data, including waveform, image, video, etc. However, data analysis is mainly conducted manually, which is inefficient and inconsistent, and makes it difficult to meet the requirements of modern quality control. In recent years, artificial intelligence and computer vision technology have developed rapidly, providing an excellent opportunity to develop intelligent detection data analysis technology and application systems. Therefore, in this special issue, recent efforts and advances in artificial intelligence technology and computer vision technology in data analysis and application systems will be discussed.

Guest Editors

Dr. Hongquan Jiang

State Key Laboratory for Manufacturing System Engineering,
Department of Mechanical Engineering, Xi'an Jiaotong University, Xi'an
710049, China

Dr. Denglong Ma

School of Mechanical Engineering, Xi'an Jiaotong University, Xi'an
710049, China

Deadline for manuscript submissions

closed (20 July 2024)



Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.5



mdpi.com/si/155458

Applied Sciences
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
applsci@mdpi.com

mdpi.com/journal/

[applsci](https://mdpi.com/journal/applsci)





Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.5



[mdpi.com/journal/
applsci](https://mdpi.com/journal/applsci)



About the Journal

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32,
20133 Milano, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, Embase, CAPIus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)