Special Issue

Sensor-Based State Estimation and Fault Diagnosis in Automatic Control

Message from the Guest Editor

For most practical control systems, state information is difficult or expensive to be totally measured by sensors. One of the alternatives for solving this problem is trying to obtain the full state estimation by partially measuring state information through a reasonable sensor layout. Additionally, practical control systems are inevitable with uncertainties. Therefore, designing a state observer to estimate the system state in the presence of unknown inputs, which is also called an unknown input observer (UIO), is a challenging issue. On the other hand, state estimation techniques have already played an important role in control engineering designs. In addition to the original application for state feedback controller design purpose, one of the other major applications of state estimation techniques or observers is observer-based actual and sensor fault diagnosis. In fact, observerbased fault diagnosis becomes one of the major methods in model-based fault diagnosis techniques, and investigations on this issue are still a meaningful but challenging open task.

Guest Editor

Prof. Dr. Fanglai Zhu

College of Electronics and Information Engineering, Tongji University, Shanghai 201804, China

Deadline for manuscript submissions

20 May 2026



Sensors

an Open Access Journal by MDPI

Impact Factor 3.5 CiteScore 8.2 Indexed in PubMed



mdpi.com/si/213310

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

mdpi.com/journal/ sensors





Sensors

an Open Access Journal by MDPI

Impact Factor 3.5 CiteScore 8.2 Indexed in PubMed



About the Journal

Message from the Editor-in-Chief

Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

Editor-in-Chief

Prof. Dr. Vittorio M. N. Passaro

Dipartimento di Ingegneria Elettrica e dell'Informazione (Department of Electrical and Information Engineering), Politecnico di Bari, Via Edoardo Orabona n. 4, 70125 Bari, 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), PubMed, MEDLINE, PMC, Ei Compendex, Inspec, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Instruments and Instrumentation) / CiteScore - Q1 (Instrumentation)

