sensors

an Open Access Journal by MDPI

IMPACT FACTOR 3.4

Indexed in: PubMed

CITESCORE 7.3

Advanced Application of Eddy Current Sensors, Devices and Systems

Guest Editors:

Dr. Xiaobai Meng
Faculty of Art, Science and Technology, University of Northampton, Northampton NN1 5PH, UK

Dr. Mingyang Lu
School of Electrical and Electronic Engineering, University of Manchester, Sackville Street Building, Manchester M13 9PL, UK

Deadline for manuscript submissions:
closed (20 August 2023)

Message from the Guest Editors

As one of the most used EM NDT techniques for the evaluation of metals, ECT plays an important role in numerous industries, particularly in the rail, aerospace, petrochemical, nuclear, and transportation sectors. Applications of ECT include the detection of surface or near-surface defects, measurement of thickness, electrical conductivity, and magnetic permeability of austenitic and ferromagnetic metals.

Conductive samples affect the electromagnetic field generated by coils with alternating induced currents. Referring to eddy current effects, materials with different properties (for example, magnetic permeability, electrical conductivity, thickness) result in different secondary electromagnetic fields and induced voltages on coils. Based on this fact, various methods have been developed to interrogate conductive samples using eddy current sensors.

The SI welcomes contributions from but is not limited to the following fields: applied eddy current sensors; eddy current non-destructive testing; pulsed eddy current testing (PECT), multi-frequency eddy current testing (MECT), real-time defect detection, evaluation of metallurgical property, novel ECT probe design, etc.

sensors

IMPACT FACTOR 3.4 | Indexed in: PubMed | CITESCORE 7.3

an Open Access Journal by MDPI

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

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.

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 (*Chemistry, Analytical*) / CiteScore - Q1 (Instrumentation)

Contact Us

Sensors Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/sensors
sensors@mdpi.com
𝕏@Sensors_MDPI