Special Issue

Sensors for Ultrasonic NDT in Harsh Environments

Message from the Guest Editors

Ultrasonic nondestructive testing (NDT) has traditionally been conducted in relatively benign environments, with temperatures between 0°C and 100°C and negligible radiation fields. However, there is a growing demand for the use of ultrasonics in high radiation fields at nuclear power plants, or at high temperatures such as those encountered in online inspection or processing monitoring in the petrochemical, metal processing, and various manufacturing industries. Commercial ultrasonic transducers are generally unable to operate in such environments, due to the breakdown of individual components, loss of sensitivity or failure of the entire system integrity. This Special Issue is focused on the design, manufacture, testing, and operational experience of ultrasonic transducers for NDT and process control in very harsh environments. Manuscripts are welcome that deal with the entire transducer, or that concentrate on the materials and design of a single transducer component.

Guest Editors

Prof. Dr. Anthony N. Sinclair

Department of Mechanical and Industrial Engineering, University of Toronto, 5 King's College Road, Toronto, ON M5S 3G8, Canada

Dr. Rob Malkin

Department of Mechanical Engineering, University of Bristol, Bristol BS8 1TR, UK

Deadline for manuscript submissions

closed (1 November 2019)

Sensors

an Open Access Journal by MDPI

Impact Factor 3.5
CiteScore 8.2
Indexed in PubMed

mdpi.com/si/23076

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

mdpi.com/journal/sensors

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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

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