

SPECIAL SESSION

Title of the special session

Sensors: Recent trends and future prospects

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Description:

Sensors are used to monitor key parameters during production and use so that equipment can remain efficient and productive. It is, therefore, obvious that sensors play a significant role in modern society and industrial scenarios.

Sensor technology revolutionized the world's technology and brought about the information age. In order to use information effectively, one of the first steps is to obtain accurate and reliable information and data. Sensors are a major component in accomplishing this step. They play a more prominent role in the research of basic disciplines. Without appropriate sensors, it is obviously impossible to collect information that cannot be obtained by the human senses directly. Many basic scientific research projects are hampered by the difficulties of obtaining object information, but the emergence of new mechanisms and high-sensitivity detection sensors leads to breakthroughs in this field. Many fields have already benefited from sensors, including industrial production, environmental protection, healthcare, etc. Regardless of the complexity of a system, the sensor is essential. In addition, they have advantages such as easy deployment and low costs. Sensors are therefore necessary in the modern world.

The special session presents the most recent research in smart sensors. The session welcomes high-quality research articles emphasizing the latest technologies and design methodologies applied to the design and realization of sensors.

The topics of interest include but are not limited to:

Smart agriculture using smart sensors

Wearable sensors for health monitoring

Optical fiber sensors

Integrating sensors with robots

Sensors for digitization and IoT improvements

Sensors for satellite communication

Sensor for GPS improvements

Sensors for fire detection

Information based decision

Sensors for transportation systems

Sensors for smart home

Sensors for manufacturing

Sensor based smart parking

Protocols for wireless sensor networks

Forest fire detection

Fall detection using sensors

Sensors for smart environment

Sensors for industrial control

Sensors for aerospace

Sensors for smart water

Sensors for security and emergencies

Interfacing techniques for sensors

Sensors for animal farming

Sensors for smart cities

Underwater wireless sensor networks

Sensors for smart metering

Integrating sensors and Artificial Intelligence

Integrating sensors with virtual, augmented, and mixed reality

Types of sensors: RF sensors, environment sensors, on-chip sensors, biosensors, nano-bio sensors, microfluidics, lab-on-a-chip, integrated sensors, electrochemical sensors, complementary metal oxide semiconductor (CMOS) sensors, field effect transistor (FET) sensors, capacitive sensors, on-chip optical sensors, on-chip mechanical sensors, ultrasonic sensors, motion sensors, photoelectric sensors, pressure sensors, pressure sensors, thermocouple, smart door sensors