

## IEEE Sensors Journal Editorial Keywords

### **SYST Sensor system integration**

- multiple-sensor systems
- smart sensor systems
- sensor arrays
- combined sensors (such as electrical & mechanical, etc.)
- packaging and interconnections

### **NETW Sensor system networks**

- sensor buses and communications
- networked sensor fusion and decisions
- sensor telemetry and monitoring

### **PHEN Sensor phenomenology**

- sensor testing and evaluation
- noise, interference effects, cross-talk
- aging, reliability, stability (against ambient interference)

### **MODL Sensor modelling**

- sensor model analysis
- sensor model analysis verification

### **SIEL Sensor interface electronics**

- sensor electronic circuits, sensor readout circuits
- sensor signal conditioning, sensor signal conversion, sensor signal digitization • sensor signal processing for high precision and stability (amplification, filtering, linearization, modulation/demodulation)
- sensor signal processing under harsh conditions (EMC, radiation, humidity, temperature); energy consumption/harvesting

### **DATP Sensor data processing**

- soft computing with sensor data (such as pattern recognition, machine learning, evolutionary computation)
- sensor data fusion
- processing of wave (EM, acoustic, etc.) sensor data
- processing of non-wave (chemical, gravity, particle, thermal, radiative and non-radiative, etc.) sensor data
- detection, estimation and classification based on sensor data

### **INTS**

- machine learning driven sensor applications
- machine learning techniques for sensors, sensor data processing and fusion
- computing architectures (such as deep learning, evolutionary computing, in/near-memory and neuromorphic computing) for sensor systems
- machine learning hardware architectures for sensors and sensor system optimization
- sensor datasets and training/validation methodologies for machine learning

**MECH Mechanical sensors**

- strain gauges: metallic, thin-film, thick film and bulk strain gauges
- pressure sensors
- accelerometers, gyroscopes, angular rate sensors, displacement transducers, force sensors
- bulk and surface acoustic wave sensors, ultrasonic sensors
- flow sensors
- microelectromechanical (MEMS) sensors

**MASS Mass-sensitive sensors**

- quartz crystal microbalance
- surface acoustic wave sensors
- mass-sensitive gas sensors
- resonators/oscillators for sensors

**THER Thermal sensors**

- platinum resistors, thermistors, diode and transistor temperature sensors
  - thermocouples, thermopiles
- pyroelectric and piezoelectric thermometers
- calorimeters, bolometers

**MAGN Magnetic sensors**

- magnetoresistors, magnetometers
- Hall-effect devices, magnetic-field sensors
- solid-state read and write heads

**OPTO Optoelectronic/photonic sensors**

- light-emitting diodes, diode lasers, other quantum sources for sensing
- photoconductors, photodiodes, phototransistors
- position-sensitive photodetectors, photodiode arrays, charge-coupled devices
  - radar sensors
- imaging sensors
- sensors using photometry, fluorimetry, interferometry, ellipsometry, surface plasmon resonance

**MICR THz/Microwave/Millimeter wave sensors**

**IONI Ionizing radiation sensors** (such as gamma ray, X-ray, charged particle and neutron detectors)

**FIBR Fiber-optic sensors**

- optical fibers for sensing
- fibre-Bragg grating sensors

**INTO Integrated optics sensors****APPL Sensor applications**

- automotive, medical, environmental monitoring and control,
- consumer, alarm and security, military, nautical, aeronautical and space sensor systems, robotics and automation
- applications of intelligent sensors (such as on-line monitoring, process control, test kits, RFID and other identification )

- internet based and other remote data acquisition and control of sensors

**ACTU Sensor-Actuators**

- integrated sensor-actuators
- smart sensor-actuators
- networkable sensors-actuators

**CHEM Chemical and biological sensors**

- electronics and physics of transduction for chemical and biological signals
- olfactory sensors ("electronic nose")
- microfluidic devices and lab-on-chip devices

**MATR Sensor materials and solid-state sensors**

- thin-film and thick-film gas sensors,
- humidity sensors
- sensors for specific ions (such as pH sensors), radon , carbon monoxide
- viscosity sensors , density sensors
- acoustic velocity sensors , proximity sensors
- altimeters, barometers