

Call for Contributions

1. Inform the Chair: with the title of your contribution

2. Submission URL:

<https://www.iariasubmit.org/conferences/submit/newcontribution.php?event=SENSORDEVICES+2024+Special>

Please select Track Preference as **AMSeMSA**

3. Note: *For 2024, all events will be held in a hybrid mode: on site or virtual choices (live, prerecorded videos, voiced presentation slides, and .pdf slides). We hope for better times allowing us to return to the traditional on site scientific events. However, we are ready to adapt any which way the conditions dictate.*

Special track

AMSeMSA: Advances in Magnetic Sensors and Materials for Sensor Applications

Chair and Coordinator

Prof. Arcady Zhukov, Doctor of Sciences, Department of Polymers and Advanced Materials, Univ. Basque Country (UPV/EHU) and IKERBASQUE, Basque Foundation for Science, Bilbao, Spain

arkadi.joukov@ehu.eus

along with

SENSORDEVICES 2024: The Fifteenth International Conference on Sensor Device Technologies and Applications

<https://www.iaria.org/conferences2024/SENSORDEVICES24.html>

November 03 - 07, 2024 - Nice, France

Magnetic Sensors play an important role in many industries (microelectronics, security and electronic surveillance, automotive, aerospace and aircraft, home entertainment, computer science, electrical engineering ...), providing the ability to detect events or changes in the environment and monitor such events through other electronic devices such as a computer processor. Depending on the type of events or environmental changes, different types of magnetic sensors can be used, for example, sensors that allow detecting weak magnetic fields or small changes in the magnetic field, sensors that are sensitive to other external stimuli such as mechanical stress, mechanical vibrations, temperature, etc. Accordingly, completely different phenomena can be used for different types of magnetic sensors. Among the phenomena suitable for magnetic field detection are Hall effect, anisotropic magnetoresistance (AMR), Giant magnetoresistance (GMR), tunnelling magnetoresistance (TMR), Giant magnetoimpedance (GMI). Phenomena suitable for detection and measurements of a magnetic field are Hall effect, anisotropic magnetoresistance (AMR), giant magnetoresistance (GMR), tunneling magnetoresistance (TMR), giant magnetoimpedance (GMI). Magnetostrictive materials, stress-impedance, microwave composite materials and flexible electronics are suitable for stresses and vibrations detections.

Accordingly, the development of high-performance sensors adapted to the requirements of the industries attracts increasing attention of researchers and engineers working in the sensorics.

This special track will focus on the last developments, latest research findings, ideas focusing on highly sensitive magnetic devices and applications, magnetic sensing technology, on basic phenomena and fundamental aspects of magnetic materials suitable for magnetic sensors, actuators and applications as well as on wireless non-destructive control and monitoring, wearable electronics and medicine involving magnetic sensorics.

Subtopics for contributions include, but are not limited to:

- Magnetic Sensors including, magnetometers, magnetoimpedance and magnetoresistance sensors, magnetoelastic sensors, Hall-effect devices, fluxgates,
- Novel magnetic materials for sensor and actuator applications and their
- advanced processing,

- Fundamentals and physics involving basic effects, theory, modeling of
- magnetic sensors,
- Magnetic measurements & instrumentation, measurement standards,
- Smart materials for wireless and non-destructive stress and temperature monitoring including (but not limited to) tuneable metamaterials, magnetorelastic sensors and devices,
- Development of magnetic sensors applications including biomedicine, electronic surveillance, electrical engineering, informatics, magnetic recording, construction monitoring, automobile and aircraft industries among others applications.

Contribution Types

- Regular papers [in the proceedings, digital library]
- Short papers (work in progress) [in the proceedings, digital library]
- Posters: two pages [in the proceedings, digital library]
- Posters: slide only [slide-deck posted on www.iaia.org]
- Presentations: slide only [slide-deck posted on www.iaia.org]
- Demos: two pages [posted on www.iaia.org]

Important Datelines

Inform the Chair or Coordinator: As soon as you decide to contribute

Submission: Sep 19, 2024

Notification: Oct 6, 2024

Registration: Oct 16, 2024

Camera ready: Oct 16, 2024

Note: The submission deadline is somewhat flexible, providing arrangements are made ahead of time with the chairs.

Paper Format

- See: <http://www.iaia.org/format.html>
- Before submission, please check and comply with the editorial rules: <http://www.iaia.org/editorialrules.html>

Publications

- Extended versions of selected papers will be published in IARIA Journals: <http://www.iaiajournals.org>
- Print proceedings will be available via Curran Associates, Inc.: <http://www.proceedings.com/9769.html>
- Articles will be archived in the Open Access ThinkMind Digital Library: <http://www.thinkmind.org>

Paper Submission

<https://www.iaiasubmit.org/conferences/submit/newcontribution.php?event=SENSORDEVICES+2024+Special>

Please select Track Preference as **AMSeMSA**

Registration

- Each accepted paper needs at least one full registration, before the camera-ready manuscript can be included in the proceedings.
- Registration fees are available at <http://www.iaia.org/registration.html>

Contact

Chair: Arcady Zhukov arkadi.joukov@ehu.eus

Logistics (Steve McGuire), steve@iaia.org