



Call for Contributions

1. Inform the Chair

2. Submission URL:

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

Please select Track Preference as **PSAA**

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

PSAA: Piezoelectric Material Sensors, Actuators, and Applications

Chairs

Igor Nazareno Soares, MSc.

Post-Graduation Programme in Electrical Engineering, University of São Paulo (USP), Brazil

igor.soares@usp.br

Prof. Dr. Ruy Alberto Corrêa Altafim, Electrical Engineering and Computer Department, University of São Paulo (USP), Brazil

altafim@usp.br

Prof. Dr. Paulo E. Cruvinel, Ph.D. Embrapa Instrumentation, Brazil

paulo.cruvinel@embrapa.br

along with

ALLSENSORS 2024: The Ninth International Conference on Advances in Sensors, Actuators, Metering and Sensing

<https://www.iaria.org/conferences2024/ALLSENSORS24.html>

May 26 - 30, 2024 - Barcelona, Spain

Materials presenting piezoelectric behaviour are those that under mechanical deformation present a voltage difference due the induction of electrical charges on their surfaces. This effect is a result of the dipoles of its natural internal structure and organization, as seen in some crystals and ceramics, as well as on polymers. which does not present necessarily natural molecular polarization. The piezoelectric effect on polymers is obtained through forced induction of dipoles in the material structure. The dipoles are induced by polymer's geometry and the imprisonment of electrical charges inside the polymer's structure. Sensors are used to support projects or business that seeks quality, efficiency, and sustainability. Responsible for transducing energies from different sources into electromagnetic signals for processing, also supports data collection for interaction between the real and virtual world. Sensors are responsible for obtaining information from the environment around us that can be used to define since the quality of a product to even the viability of the entire integration and optimization process in an informed and sustainable way. In such a context, in general, sensors can be used in

several different areas, such as: industry, education, security, health, environment, arts, science and technology, among others. Regarding on the use of piezoelectric sensors and actuators, which one may find in application for those different areas, is still possible to meet opportunities, not only for research, but also for development and innovation.

Topics include, but not limited to:

- Evaluation of the electrical, magnetic, and mechanical properties
- Innovation by modeling and simulation
- Piezoelectric sensors and signal processing
- Innovation by emulation and enhancement
- Actuators and its control process
- Interoperability
- Internet of things and sensor's network
- Piezoelectric intelligent sensors and actuators data analysis
- Big data analysis, architectures, and transdisciplinary measurement.
- Fields of interest
 - Characterization and modelling
 - Properties and applications
 - Sensors development
 - Manufacturing
 - Engineering
 - Economy
 - Business
 - Science
 - Industry
 - Health

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.iaaria.org]
- Presentations: slide only [slide-deck posted on www.iaaria.org]
- Demos: two pages [posted on www.iaaria.org]

Important Datelines

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

Submission: April 10

Notification: April 28

Registration: May 8

Camera-ready: May 8

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

Paper Format

- See: <http://www.iaaria.org/format.html>

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

Publications

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

Paper Submission

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

Please select Track Preference as **PSAA**

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.iaria.org/registration.html>

Contacts

Chair

Igor Nazareno Soares : igor.soares@usp.br

Logistics (Steve McGuire): steve@iaria.org