



## Call for Papers

### IEEE Open Journal of Instrumentation and Measurement (IEEE OJIM)

#### Special Section on

### Innovations in Battery Technology: Sensing, Algorithms and Applications

In today's rapidly evolving technological landscape, batteries play a crucial role in a wide range of applications, from portable electronics to electric vehicles and renewable energy storage systems. In this context, it is our pleasure to announce this *Special Section* in the IEEE OJIM entitled “Innovations in Battery Technology: Sensing, Algorithms and Applications”. The scope of this Special Section is intentionally broad, inviting contributions that cover a wide range of scientific aspects related to batteries. We welcome innovative research on the development of new sensors for Battery Management Systems (BMS), advances in Thermal Runaway prediction methods to increase internal safety by reducing the risk of battery explosions, breakthroughs in materials science for greater efficiency and longer life cycles, and advanced algorithms for estimating the State of Charge (SoC) and State of Health (SoH). Furthermore, we encourage submissions regarding multiphysics battery modeling, proposals that explore the integration of batteries into smart grids and IoT devices, the socioeconomic impacts of battery technology within the green economy transition, including recycling and sustainability practices.

The topics for this Special Section include but are not limited to the following:

- Battery sensing technologies
- Battery Management Systems
- Battery thermal management systems and Thermal Runaway prediction methods
- Materials and next-generation batteries
- State of Charge and State of Health estimation
- Multiphysics battery modeling
- Electrochemical energy storage
- Renewable energy integration
- Smart grid and battery storage

Each submitted paper will go through a rigorous review process consistent with the IEEE OJIM requirements. **Each accepted paper for this Special Section receives an Open Access fee waiver**; i.e., accepted papers when published will not be charged Open Access fee. Papers will be published as they are accepted, and the Special Section is intended to be published in the latter part of 2024, consistent with the following schedule:

#### Deadlines

**Submission:** June 30, 2024  
**First decision:** July 22, 2024  
**Final decision:** September 15, 2024  
**Publication Volume:** 2024

For more info and submission instructions, please visit OJIM's official website: <http://ojim.ieee-ims.org/>

#### Guest Editors:

Prof. Luigi Ferrigno  
Dr. Filippo Milano

University of Cassino and Southern Lazio, ITALY (ferrigno@unicas.it)  
University of Cassino and Southern Lazio, ITALY (g.miele@unicas.it)