

## Special Section on:

# Application of Advanced Signal Processing, Artificial Intelligence and Machine Learning techniques to Electric Machines

(Sponsored by: TC on Electric Machines)

**Theme:** The application of advanced signal processing and Artificial Intelligence (AI) techniques to electric machines has proliferated during recent years. Many different areas related to the design, modelling, control, diagnosis or optimization of electric machines, among many others, have used, in some extent, many of these recent technologies to enhance the results that years ago were not achievable with conventional methods. On the other hand, in the new era of Internet of Things (IoT), machine learning, big data analysis and deep learning methods have proliferated; they take advantage of the electric machines data to build intelligent algorithms that help to optimize and automatize diverse aspects related to these energy conversion devices. In this context, an intense research effort is developed over recent years, merging AI and other IoT-related methods.

The aim of the special section is to provide a timely opportunity for researchers, practicing engineers, and other stakeholders to share their latest discoveries related to the application of advanced artificial intelligence and machine learning techniques to electric machines. Submissions need to demonstrate strong original contributions to these areas:

- ✓ **New signal processing algorithms applied to the control, design, monitoring and/or diagnostics of electric machines.**
- ✓ **Advanced AI techniques applied to electrical machines.**
- ✓ **Application of big data technologies to the control, design, monitoring and/or diagnostics of electric machines.**
- ✓ **IoT technologies applied to electric machines areas.**
- ✓ **Automatization of electric machines-related areas systems using modern technologies.**
- ✓ **Deep learning methods applied to electric machines.**
- ✓ **Design to digital twin-based systems adapted to electric machines applications.**
- ✓ **Blockchain and machine learning technologies applied to electric machines areas.**
- ✓ **Knowledge-driven intelligent optimization methods applied to electric machines areas.**
- ✓ **Educational-related applications of AI and machine learning algorithms to electric machines.**

## Manuscript Preparation and Submission

Check carefully the style of the journal described in the guidelines “Information for Authors” in the IEEE- IES website: <http://www.ieee-ies.org/pubs/jestie>. Please submit your manuscript in electronic form through: <https://mc.manuscriptcentral.com/jestie-ieee/>.

On the submitting page, in pop-up menu of manuscript type, select: “**SS on Application of Advanced Signal Processing, Artificial Intelligence and Machine Learning techniques to Electric Machines**”, then upload all your manuscript files following the instructions.

### Corresponding Guest Editor

**Prof. Jose Antonino-Daviu**  
Universitat Politecnica de  
Valencia, Spain  
Email: [joanda@die.upv.es](mailto:joanda@die.upv.es)

### Guest Editor

**Prof. Thomas Wolbank**  
Vienna University of  
Technology, Austria, Email:  
[thomas.wolbank@tuwien.ac.at](mailto:thomas.wolbank@tuwien.ac.at)

### Guest Editor

**Dr. Shafiqh Nategh**  
Volvo Cars Corporation,  
Sweden, Email:  
[shafiqh.nategh@ieee.org](mailto:shafiqh.nategh@ieee.org)

### Guest Editor

**Prof. Radu Bojoi**  
Politecnico di Torino, Italy  
Email: [radu.bojoi@polito.it](mailto:radu.bojoi@polito.it)

## Timetable

Deadline for manuscript submissions:  
**July 31, 2022.**

Information about manuscript acceptance:  
**January, 2023**

Publication Date:  
**April, 2023**