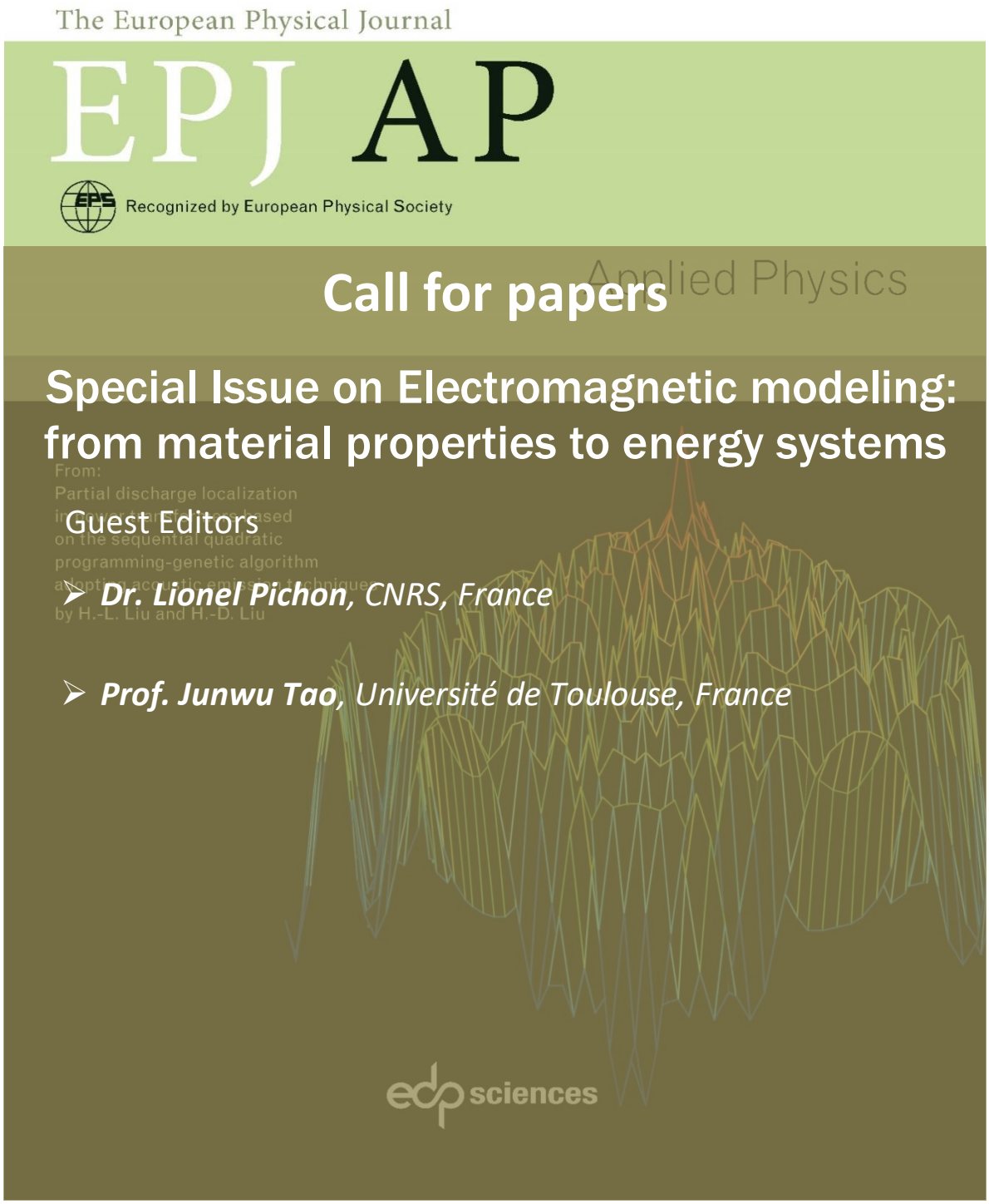


## NUMELEC 2024

The special issue welcome contributions presented at NUMELEC 2024. The10th European Conference on Numerical Methods in Electromagnetism (NUMELEC 2024) took place from July 8 to 10 in Toulouse at Toulouse INP-ENSEEIHT. The aim of NUMELEC is to offer the two communities working in the fields of low and high frequencies the opportunity to meet and exchange views on the latest advances in their research. The three-day conference featured joint oral and poster sessions, discussions on common topics, and the development of useful

guidelines for both communities. The areas covered will include methodological aspects such as formulations of electromagnetic problems in static, quasi-static or variable regimes, resolution and optimization methods, as well as applicative aspects linked to the modeling of materials and devices.

## Aim and Scope of the Themed Issue

The aim of this Special Issue on electromagnetic modeling is to assemble high-quality papers that include the recent progress and current research about numerical methods, modelling tools and optimization algorithms in electrical and electronic engineering. It will cover both low frequency applications involving energy systems and coupled problems and high frequency applications related to wave propagation and electromagnetic compatibility.

The design and optimization of complex systems in electrical and electronic engineering require appropriate modelling tools to face multiscale problems and/or multiphysics aspects. To face large scale problems or high miniaturization of devices, traditional and historical approaches have sometimes to be combined or hybridized. They also need to be thought and developed in a context of high-performance computing, model reduction and learning techniques to contribute to new challenges in artificial intelligence and digital twins within the engineering community.

Scope of papers that will be considered for publication in this Special Issue covers: (i) the current trend and latest research on mathematical modelling and formulations, discretization methods and numerical techniques, optimization algorithms and (ii) their applications in energy and electrical engineering. Specific areas of interest include multi-physics and coupled problems; electric vehicle and wireless power transfer; antennas and electromagnetic compatibility; electrical machines and power electronics; non-destructive testing and diagnosis, and other relevant topics.

## Submissions

All relevant papers will be carefully considered, reviewed by a distinguished team of international experts, and published in accordance to the Journal's standard policies. Full research papers and comprehensive review articles can be submitted online via the journal's submission and peer review site.

**Submission deadline – July 31st 2024**

## Charges

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