Special Issue

Fundamental Challenges and Novel Methodologies in the Next Generation Computational Electromagnetics

Message from the Guest Editors

This Special Issue will provide an overview of the most recent results and research activities concerned with computational electromagnetics (CEM). It will be devoted to CEM experts and practitioners sharing the fundamental obstacles and innovative ideas in electromagnetic analysis, design, and optimization. Over the past decade, we have witnessed many CEM advancements and simulation-driven discoveries. However, significant challenges remain, which require non-traditional thinking. These challenges include but are not limited to the following:

- multi-physics and multidisciplinary simulation,
- uncertainty qualification and statistical wave modeling,
- simulation-aided EM design and optimization,
- machine learning and deep learning based computational electromagnetics methods,
- high-performance EM computing via parallel and GPU computations,
- a posteriori error estimate and adaptive mesh refinements,
- reduced order modeling applied to EM problems,
- fast and efficient EM computational methods,
- domain decomposition techniques.

Welcome to contribute.

Guest Editors

Prof. Dr. Francesca Vipiana

Prof. Zhen Peng

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Deadline for manuscript submissions

closed (31 December 2020)

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About the Journal

Message from the Editor-in-Chief

Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guest-edited by leading experts in selected topics of interest.

Editor-in-Chief

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.8 days after submission; acceptance to publication is undertaken in 2.4 days (median values for papers published in this journal in the first half of 2025).

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