

Special Issue

Advanced Topics in Modelling Microwave and mmWave Electron Devices

Message from the Guest Editors

RF and Microwave electronics represents a key research field that can enable a wide variety of applications, including wireless telecommunications, radars and satellite surveillance systems, space commercialization and, more recently, sensing systems for quantum electronics. This Special Issue is devoted to collecting selected papers, on the peculiar modelling approaches required for microwave and mm wave electron devices. Relevant topics include, but are not limited to:

- Models for RF, microwave and mm-wave technologies: GaN HEMTs, metamorphic HEMTs, FinFETs, nanodevices;
- Physics-based models; compact models; behavioral models;
- ANN modeling of microwave components;
- Multiphysics simulation: electromagnetic, thermal, traps, electronic transport, quantum confinement;
- Time domain/frequency domain/envelope domain models;
- Stability analysis;
- Noise models;
- Cryogenic models;
- Sensitivity, statistical and reliability analysis.

Guest Editors

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closed (20 October 2024)



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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 guestedited by leading experts in selected topics of interest.

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.4 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the second half of 2025).