Special Issue

AI-Enhanced Electromagnetic Sensing and Inverse Imaging

Message from the Guest Editors

Advances in electromagnetic sensing and imaging stand at the crossroads of physics, engineering, data science, and applications. With the rise of artificial intelligence, machine learning, and data-driven modelling, new opportunities are emerging to address long-standing inverse problems, boost sensitivity, improve reconstruction, enable real-time monitoring, and enhance diagnostics across environmental, industrial, biomedical, nondestructive testing, and material domains. The purpose of this Special Issue is to provide a platform for original research, comprehensive reviews, and tutorial articles that explore the synergy of AI (including deep learning, data fusion, and model-based learning) with electromagnetic sensing, measurement, modelling, and inverse imaging. We invite contributions that span from theory to algorithms, simulation, and experiment, including applications such as remote sensing, microwave/millimetre/sub-terahertz imaging, ground-penetrating radar, antenna arrays, material characterisation, biomedical EM, structural health monitoring, smart sensing systems, optimisation of sensor/actuator networks, and real-world deployments.

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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.

Editor-in-Chief

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