Special Issue

Computational Electromagnetism

Message from the Guest Editors

Many electromagnetic problems such as *large-scale* scattering and radiation applications in complex domains' *multiscale* structures modeling small and nano antennas, sensors, integrated circuits, etc.; and *multiphysics* problems require a discretization of the computational domain that yields billions of unknowns. Addressing this issue demands a multidisciplinary effort involving physics, computer science and architecture, advanced mathematical methods for integral equations, fast solvers, iterative methods, preconditioners, linear algebra, and big data. At the crossroads of these science fields, computational electromagnetics aim at solving accurately and rapidly the aforementioned problems, without heavy computational requirements. Also, efficient computer simulations have the potential of providing insightful knowledge that will eventually help improve the design and robustness of the products.

Keywords
- Computational electromagnetics
- Maxwell's equation
- High-performance computing
- 3D Electromagnetic modelling
- Advanced numerical methods
- Multiscale structures
- Multiphysics problems
- Artificial Intelligence

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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