Special Issue

Integral and Differential Equation Methods in Electromagnetic Radiation and Scattering

Message from the Guest Editor

Mathematical computations related to antenna radiation and target scattering are of extreme interest to electromagnetics engineering. Numerical techniques have been an indispensable tool in electromagnetics for decades, falling into two main categories: Integral Equation and Differential Equation Methods. Fundamental computational methods with a long history of continuous development include the Method of Moments (MoM), the Finite Element Method (FEM), the Finite Volume Method (FVM), the Finite Difference Time Domain Method (FDTD), the Method of Auxiliary Sources (MAS), etc. For high frequencies, extremely high computational resources are required, in terms of memory and CPU time. “Fast” variants of the latter techniques were developed to reduce the computational cost, such as the Adaptive Integral Method (AIM), the Adaptive Cross Approximation (ACA), the Fast Multipole Method (FMM), its parallel version called the Multi-Level Fast Multipole Algorithm (MLFMA), its time domain counterpart called the Plane Wave Time Domain (PWTD) method, etc. The aim of this Special Issue is to host and promote the recent advancements made in this research area.

Guest Editor

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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 guest-edited by leading experts in selected topics of interest.

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