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A PUBLICATION OF THE IEEE MICROWAVE THEORY AND TECHNOLOGY SOCIETY,
THE IEEE ANTENNAS AND PROPAGATION SOCIETY,
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Special Section on

Modeling Methods for Wave Propagation in Wireless Communication Systems

Expected publication: 2024 Volume

The IEEE Journal on Multiscale and Multiphysics Computational Techniques (J-MMCT; 2023 Clarivate JCR Impact Factor: 2.3; Scopus CiteScore: 3.7) will include a special section dedicated to "**Modeling Methods for Wave Propagation in Wireless Communication Systems**". Propagation modeling is an essential aspect for the design and deployment of wireless communication, vehicular, radar, IoT, body area networks, optical, etc., systems, as the design of all components and the overall link is influenced by the propagation characteristics of the channel. A deep understanding of wireless propagation modeling is therefore crucial for the development, performance optimization, and test of present as well as future wireless systems. This special issue reports the latest achievements and future perspectives in the field of wave propagation, with an emphasis on modeling methods and techniques.

The topics of the Special Issue include, but are not limited to:

- Empirical, analytical, and numerical propagation modeling methods
- Microwave/millimeter-wave/THz propagation models
- ELF, VLF, HF propagation, tropospheric propagation, laser propagation
- Advanced techniques in modeling scattering, diffraction, antenna effects, etc
- Terrain and topography modeling
- Propagation in indoor, urban, terrestrial, and non-standard environments (e.g., tunnel, biological body, subsurface, underwater, and space)
- Propagation modeling in synthesized environments (e.g., indoor/outdoor buildings with RIS)
- Hybrid propagation models and techniques
- Machine learning and AI in propagation modeling

The J-MMCT Editorial Board will review every paper in the same manner as any other regular submission.

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Other Submission instructions:

(1) You must reference your own work, especially recent journal/conference publications. Discuss your related publications in the introduction. Distinguish the new results you present in your current manuscript from those found in your previous publications, **to demonstrate that the paper includes sufficient new technical material to justify a new paper, when compared to all previously published papers**.

Submissions are accepted any time, but no later than **March 31, 2024** for potential inclusion in the 2025 volume. If you have any questions, you can contact the Editor-in-Chief (Prof. Costas Sarris at eic-jmmct@ieee.org), or the Guest Editors:

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