



Modeling, Analysis, and Design Methods for Embedded Antennas in IoT Wireless Devices

Submission deadline: 31 December 2024

Aims & Scope: Accurate, rapid, and easy modeling of IoT devices needs to evolve to support a new generation of wireless engineers designing the entire device, including the antennas and matching circuits, as parts of the complete radiofrequency system. Therefore, the special section seeks advances in modeling and analysis to simplify the process of designing IoT devices that embed small and multiband antennas, in particular taking into account the antenna and the platform.

Potential topics include but are not limited to the following:

- Electrically small, miniaturized, multiport, and multiband antennas
- Fundamental boundaries taking into account planar IoT antennas
- EM design automation tools for designing embedded antennas in IoT devices
- EM modeling & simulation tools for simulating the IoT device, including antennas and the impact of nearby elements (a human body, a metallic body, etc.)
- Antenna systems for IoT applications (smart tracking, smart meters, etc.)
- Optimization techniques for antenna and matching circuit synthesis in IoT devices
- Manufacturing techniques for IoT devices
- Reconfigurable antenna systems robust to the environment (for example, device on a metallic body, human/animal body, buried devices such as parking sensors)

Keywords:

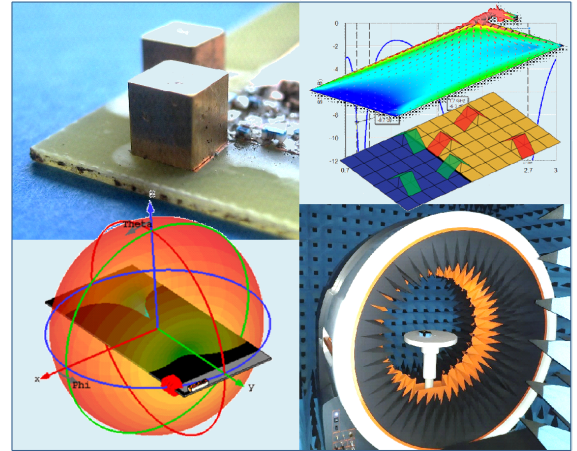
Electrically small antennas , Multiband, Reconfigurability, Optimization, Manufacturing, Device modeling

Guest Editors:

Jaume Anguera, Ignion and Universitat Ramon LLull, Spain, jaume.anguera@ignion.io;

Martijn van Beurden, Eindhoven University of Technology, the Netherlands, M.C.v.Beurden@tue.nl ;

Miloslav Capek, Czech Technical University in Prague, Czech Republic, miloslav.capek@fel.cvut.cz



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