

IEEE AWPL Special Cluster 2021 on “Antenna Considerations for Future Millimeter-wave and Terahertz Wireless Systems”

High transmission data rates, low latency, high reliability and interference-free operation are most sought-after features today for applications ranging from communications to infotainment and positioning to healthcare. It is the driving force behind recent tremendous developments in wireless networks in new frequency ranges. This makes the millimeter-wave (30 to 300 GHz) and terahertz (0.1 to 10 THz) bands as the key candidates for future wireless networks. Successful deployment of wireless technologies rely heavily on the performance of antenna design and future wireless networks are no exception. A thorough understanding of the antenna design is, therefore, eminent for full exploitation of the potentials of the millimeter-wave and terahertz spectrum. These frequencies offer great opportunities for device miniaturization thanks to short wavelength fostering compact and high gain antennas. Nevertheless, preserving good performance with ever-decreasing form factor and under ever-increasing interference scenarios is making the complicated task of antenna design more complex. This Special Cluster is aimed to provide a comprehensive understanding of the millimeter-wave and terahertz antenna design stimulating novel methods for the development of efficient, reliable, robust and cost-effective antenna solutions for future wireless networks.

- Antennas for mm-wave and terahertz applications
- Antennas for mm-wave and THz wearable and implantable devices
- Antennas for mm-wave/THz enabled Internet-of-Things
- Antennas for mm-wave and THz autonomous systems and vehicular communications
- Antenna-in-package and antenna-on-chip solutions for mm-Wave/THz systems
- Massive MIMO Antenna Systems: design and applications
- mm-Wave RFID antennas
- mm-Wave and THz base station and terminal antennas
- mm-Wave and THz antennas for Machine-to-Machine (M2M) communications
- Phased array antennas for mm-Wave and THz operation
- Antennas for indoor localization at mm-Wave and THz frequencies
- Antenna measurement techniques at mm-Wave and THz frequencies

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Prospective authors are encouraged to contact the Guest Editors for any questions or to determine the suitability of their contribution for this special cluster. Papers should be prepared following the same submission instructions as for regular IEEE AWPL manuscripts (four-pages technical content maximum and one reference page, double-column, IEEE format), available via the Information for Authors website (<http://awpl.eleceng.adelaide.edu.au/authors.htm>). The authors should indicate in the cover letter to the Editor-in-Chief that the manuscript is being submitted in response to the Call for Papers for the focused cluster. Prospective authors should refer to the timeline below for key dates. The publication charges will be at the standard rates for AWPL.

Key dates:

- Submission deadline: March 31, 2021
- First decision: May 15, 2021
- Revised manuscripts deadline: June 15, 2021
- Final decision: July 30, 2021
- Final manuscripts due by: September 1, 2021
- Online publication: Shortly after final manuscript submission
- Cluster publication: November 2021 issue of AWPL