

# IEEE Transactions on Aerospace & Electronic Systems

## Call for Papers

### Near-Field Radar Technologies and Applications

**Overview:** The IEEE Transactions on Aerospace and Electronic Systems (TAES) is inviting submissions for a special section dedicated to advancing 6G near-field radar technologies. This special section aims to highlight pivotal research, innovations, and theoretical insights that are crucial for shaping the next generation of wireless systems, emphasizing the significance of 6G near-field radar, and it explores the unique capabilities and challenges posed by these advanced radar systems when operating in 6G contexts. Contributions are encouraged to address cutting-edge topics, including the integration of multi-antenna systems such as reconfigurable intelligent surfaces and holographic MIMO, which promise to revolutionize radar applications in 6G and beyond.

**Scope:** Radar systems operating in the near-field regime hold immense promise for the next generation of wireless systems. These systems, where the distance between the transmitter/receiver and the target is comparable to or smaller than the wavelength, offer unique capabilities and challenges across various radar disciplines. This special section seeks original contributions that advance the understanding and application of 6G near-field radar technologies.

Topics of interest include, but are not limited to:

- Fundamental limits and performance analysis of near-field radar technologies;
- Near-field NOMA/RSMA/grant-free access methods in radar applications;
- Near-field localization, sensing, and tracking techniques;
- Near-field integrated sensing and communications;
- Holographic MIMO/RIS-enabled near-field radar technologies;
- Near-field radar techniques for simultaneous wireless information and power transfer;
- Physical-layer security techniques for near-field radar applications;
- Artificial Intelligence for near-field radar technologies;
- Near-field radars for networks of unmanned aerial vehicles;
- Near-field technologies for automotive radar applications;
- Near-field radar test-beds.

Prospective authors should submit their manuscripts following the IEEE TAES guidelines. Authors should submit a PDF version of their complete manuscript to Manuscript Central according to the following schedule:

<b>Manuscript submission:</b>	January 15, 2025	<b>First review completed:</b>	April 1, 2025
<b>Revised manuscript due:</b>	May 15, 2025	<b>Second review completed:</b>	June 30, 2025
<b>Final manuscript submission:</b>	July 15, 2025	<b>Publication date:</b>	2025

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