Paper Submission Deadline: **2 December 2025**

RFSA

Radio Frequency
Systems & Applications

RFSA2026 | **8 – 11 June 2026** | ims-ieee.org
Thomas M. Menino Convention & Exhibition Center (MCEC), Boston, MA

Guidelines for Topic and Content Selection for the RFSA Symposium

The MTT-S **RFSA Symposium** has been established as a new conference under the umbrella of the IMS and is dedicated to systems and applications spanning frequencies from **MHz to THz**. While the RFSA Symposium will naturally encompass the spectrum of system and application topics historically addressed within the IMS, its scope is deliberately broader. The conference is designed to explicitly embrace a wider range of subject areas and to place enhanced emphasis on **system-level innovation and application-oriented research**. The following considerations are intended to provide guidance in assessing the relevance and suitability of submissions to the RFSA Symposium.

- **Primary Focus on Systems and Applications:** The RFSA Symposium seeks contributions in which the principal innovation resides at the level of systems or applications. Such innovations may, but are not required to, involve novel hardware contributions; they may equally arise from advances in signal processing or from synergistic integration of hardware and signal processing. All applications and systems listed in the Call for Papers, including newly emerging topics, fall within the scope of the RFSA Symposium.
- **Requirement of Hardware and/or Measurement Data Relevance:** Submissions whose central contribution concerns systems or applications are expected to demonstrate hardware and/or measurement data.
  Example: A paper presents a new signal processing approach for FMCW-based measurement of human vital signs with a millimeter-wave radar. The approach is validated with measurements from a 60 GHz radar. This paper falls within the scope of the RFSA Symposium.
- **Validation of Hardware-Related Signal Processing:** Topics in signal processing are to be substantiated through experimental validation, either via measurement data or hardware prototypes. If the novelty lies in the signal processing (the key innovation), the corresponding hardware does not need to be new but the novel/new signal processing must be validated with some hardware/measurement. Relevant topical examples include, but are not limited to antenna array synthesis, beamforming, calibration, angle-of-arrival estimation, modulation techniques, signal pre- and post-distortion methods, and spectral estimation for sensing and communications or application-specific algorithms. *Example: Two transmitters of a distributed antenna system are coherently synchronized via a sidelink using a new method. The new method is demonstrated in a hardware setup. This paper lies within the scope of the RFSA, as the method is new and as it has been validated by a measurement.*
- **Algorithmic Innovations Supported by Standardized Datasets:** Contributions advancing algorithmic approaches in domains where standardized or publicly available measurement datasets are established—such as in many machine learning and artificial intelligence applications—may also be within the scope of the RFSA

Symposium.
Example: A paper introduces a new AI-based approach for linearizing a transmitter frontend. The author did not collect original measurement data but instead used a labeled measurement dataset from another research group available on IEEE Xplore. This paper can also be accepted by the RFSA Symposium.

- **Exclusion of Purely Theoretical Algorithms:** Manuscripts presenting algorithmic contributions without validation through measurement data or hardware implementation will not be considered for inclusion in the RFSA Symposium.