

# IEEE Journal of Radio Frequency Identification

## Special Issue on “Cyber-Physical Radio”

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Cyber-Physical Radio systems are RF-“plus” technologies -- radios that also sense, harvest power for computation, and link objects in the physical world to their digital twin on the cloud. This special issue will highlight superlative works stemming from the three co-located conferences in Atlanta, GA from 22-24 April 2025, which include:

**IEEE RFID 2025:** The flagship conference from the IEEE Council on RFID is in its 19th year as it celebrates the latest innovations, inventions, applications, and fundamental research in the RFID field.

**IEEE Digital Twins and Parallel Intelligence (DTPI) 2025:** Digital Twins and Parallel Intelligence play a crucial role in the advancement of smart Radio Frequency Identification (RFID) and cyber-physical radio systems. DT technology based on Cyber-Physical Systems (CPS) has been used in modeling and managing complex systems for virtual-real interactions in smart cities, healthcare, transportation, education, and many other fields. This conference will be the 5<sup>th</sup> in its series showcasing the top international research in the field of digital twins.

**IEEE Additively Manufactured Electronic Systems (AMES) 2025:** The emergence of additively manufactured electronics in RFID, optical, general radio, and other electronic applications has radically changed the cost and capability of electronic manufacture, from consumer, commercial, military, and space applications. The IEEE AMES 2025 is the inaugural conference of what will be a very important and long-lived conference series jointly managed by IEEE CRFID and IEEE MTT-S.

The IEEE JRFID special issue on Cyber-Physical Radio will accept direct submissions in the co-located conference areas. The submission window for the special issue will open early and provide an alternate path for publishing and presenting at either of the three Atlanta-based conferences. A manuscript submitted by the conference submission deadline will begin review with the journal and result in one of three decisions after peer review:

- The manuscript will not be recommended for publication or presentation.
- The manuscript will be accepted for publication to IEEE JRFID or accepted to the journal pending revisions. In this case the author will be invited to present at the appropriate conference (IEEE RFID/DTPI/AMES 2025) while successive revisions and/or final manuscripts are produced for IEEE JRFID.
- The manuscript may instead be recommended for publication by IEEE RFID, AMES, or DTPI 2025 and excluded from publication from IEEE JRFID. In this case, a presentation at the conference is scheduled and the paper will appear in

IEEEExplore along with the other accepted papers in the conference proceedings.

The topics for the special issue on Cyber-Physical Radio

- All aspects of RFID Technology and the IEEE RFID 2025 workshops
- All aspects of Digital Twins and Parallel Intelligence as well as the IEEE DTPI 2025 workshops
- All aspects of Additively Manufactured Electronic Systems as well as the IEEE AMES 2025 workshops

See the individual conference calls for papers for specific details about each subject.

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### **Submission Guidelines:**

Authors are requested to electronically submit their original manuscripts through the IEEE Manuscript Central at <https://mc.manuscriptcentral.com/jrfid>, according to the format described at <https://www.ieee.org/conferences/publishing/templates.html>. The manuscript type for this special issue is “**Cyber-Physical Radio Systems**”.

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### **Guest Editors**

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