



Virtual Radar Challenge

Hosted by 2020 IEEE Radar Conference
<http://ieee-aess.org/radar-challenge>



Announcing the Radar Challenge

The Radar Challenge is a series of events co-hosted with radar conferences that enables participants to experience the magic of radar in a personal, tangible and experiential way. The events require participants to sense a scene using their self-engineered “home-brew” radar. The goal is to build a community of radar builders that collectively explore the art of the possible in making “COTS-based” radars.

The Virtual Challenge

In response to the constraints imposed by COVID-19, the Florence radar challenge is moving to a virtual format. Challenge participants are invited to develop a low-cost passive radar system for the tracking of aircraft. Participants should demonstrate the capability of their system to detect and locate aircraft by performing a data capture at a location of their choice. Participants should submit an overview paper describing their system, data capture and any subsequent processing to be judged in the challenge.

Challenge Criteria

Submissions to the challenge will be judged based on the following criteria:

- Design Ingenuity
- Use of COTS components
- Cost and Performance/Price Ratio
- Deployment and data collection
- Demonstrated Performance such as accuracy and detection/track range
- Hardware and Software Design Overview and Bill of Materials

NOTES:

- Deployment is for a field data collection
- Bill of Materials must include source & price

Cost

The maximum cost for the passive radar system must not exceed €1000. As the challenge judges the performance to price ratio, cheaper solutions will be judged more favourably.

Deadlines

The following deadlines apply to the challenge:

- 09/09/20 Submission of one to four page overview paper
- 19/09/20 Submission of results (video, viewgraphs, plots, etc.)
- 23/09/20 Prize Announcement and Presentation

Judging

Participating teams will be judged based on their solution as described and demonstrated in their overview paper. Prizes will be awarded for the winning teams. All overview papers will be added to the AESS Radar Challenge Website.

Contact

The challenge is organised by the 2020 IEEE Radar Conference and the IEEE AESS Radar Systems Panel.

In the case of questions, feel free to contact:

Alex Charlish (alexander.charlish@ieee.org) or Frank Robey (fr@ieee.org)

Check the website regularly for news as well as tips on getting started!

