

Radar Systems Panel (RSP)

Tech Ops Future Directions

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Future Directions – Panel Operations

- Ad hoc committee exploring the prospect of a Transactions on Radar journal (want to link to strong, sustained growth in the Radar Conference series)
- Moved the Student Papers Awards out of being run by the Radar Conference and now overseen by a dedicated committee within the RSP (ensure global perspective and consistent operation)
- Discussing ways in which to increase/sustain industry participation within the Radar Conference series and the IEEE radar community
- Continuing to work to expand the footprint of AESS into the civilian radar community
- Determining the best path ensure long-term sustainment of the Radar Summer School

Future Directions – Radar Technology

- mm-wave / THz sensing and applications thereof
- expanding civil applications in automotive safety, wearables, and variety of autonomous vehicles
- software-defined radar capabilities
- Radar spectrum sharing (with 5G & beyond) and multi-function systems (RF convergence)
- continued expansion of waveform diversity capabilities and applications
- increasing decision autonomy in sensor systems (cognitive RF)
- quantum radar (though somewhat controversial)

Future Directions – Radar Technology

- Electromagnetic spectrum maneuver
- integrated multi-modality systems (acoustics, optical, EO, IR, RF, etc.)
- Distributed/networked sensing
- “system-on-chip” radars
- Integration of passive and active sensing
- “extreme fidelity” systems (ultra-stable clocks, digitization at higher bandwidths, higher bit depths for dynamic range)
- Advances in metamaterials for dynamically reconfigurable operating modes