



Call for Papers
IEEE Aerospace and Electronic Systems Magazine

Special Issue on
Waveform Diversity

Waveform Diversity for Electromagnetic Sensing and Communications

Since the term Waveform Diversity (WD) was popularized in 2002, anticipated improvements in electromagnetic systems via more flexible waveform design enabled by technological developments are beginning to be realized. Less restrictive constraints on communications, inherent in 1-way propagation and much less expensive components, have allowed that community to design and develop more diverse waveforms and systems. Consequently, commercial communication systems are proliferating at incredible rates, resulting in extremely spectrally dense environments and fierce competition for spectrum that traditionally has been the almost exclusive province of radars as primary legal users. However, for radar applications, the promise is being much more slowly realized, and inundation of communication devices has caused significant radar-communication interference problems. This special issue will address recent novel results in theoretical and hardware solutions for improved radar operation, not only relating to spectral issues but also for all radar applications, such as those identified below in the Key Topic Areas, as well as prominent WD advantages such as enhanced sensitivity, reduced error rates, robustness to limited calibration and non-stationary interference.

Key Topic Areas

- Co-designed radar-communication systems
- Physically realizable waveforms subject to electromagnetic and system effects
- Cognitive/bio-inspired radar
- Distributed/MIMO radar
- RF through millimeter-wave multi-function systems
- Improved performance in contested and congested spectrum

For information on paper submission and the requisite contents for a full paper, prospective authors should consult <http://ieee-aess.org/main/index.php/publications/systems-magazine> (under *Author's Instructions*). Submission and review of manuscripts are handled via the IEEE AESS Magazine's online system at http://sysaes.msubmit.net/cgi-bin/main.plex?form_type=home. Manuscripts will be peer reviewed according to the standard IEEE AESS process.

Important Dates

- Manuscript submission deadline: 15 September 2015
- First review completed: 31 October 2015
- Revised manuscript due: 01 December 2015
- Second review completed: 15 January 2016
- Final manuscript due: 15 February 2016

Guest Editors

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