

2012 IEEE Radar Conference

Ubiquitous Radar

May 7-11 2012

Atlanta

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CALL FOR PAPERS

For a field that was declared 'mature' about 40 years ago, we've certainly come a long way. Techniques and applications for effective utilization of radars for space exploration, ever more sophisticated and effective military systems, and commercial, environmental, and counter-terrorism applications seem to be 'pouring out of the woodwork' of industrial, governmental, and academic institutions.

From the exploration of our solar system and persistent monitoring of our planet – for both environmental and defense purposes – to the rapid evolution of radar's traditional roles in surveillance, tracking and targeting for military applications; and on to emerging applications such as airborne persistent surveillance, the accelerating pace of implemented automotive radar techniques, the

screening of individuals and structures to detect potential threats, and the detection of buried pipelines, living survivors, and mines, this 'mature' field appears to be on the threshold of becoming ubiquitous around the world and in many aspects of military, industrial, and commercial developments. Hence, the theme for this year's Radar Conference is **"Ubiquitous Radar"**.

Potential contributors are encouraged to submit their innovations and findings in any and all areas of radar and its applications. The list below is meant as a guideline for characterizing your submission. Individuals are encouraged to propose 'special sessions' in areas in which they believe we can put together a rich set of synergistic papers.

Welcome to the future!

RADARCON 2012 Topic Areas

Phenomenology & Target & Clutter Modeling

- Target signature characterization for low and high resolution systems
- Clutter, background and interference modeling and characterization
- Propagation effects (refraction, diffraction, attenuation, etc.)
- Nonlinear propagation effects in inhomogeneous materials

Radar Systems

- Innovative System Designs and Applications
- Architectures
- Newly Fielded Systems
- Cost reduction technologies
- Non-military applications – auto radar, disaster rescue (through walls/rubble), all-weather imaging, etc.
- Ground Penetrating Radar
- Digital Beam Forming
- Shared Aperture Systems
- MIMO

Component Advances

- Digital and RF (GaN, HV Gas, SiGe, GaAs)
- Photonic Components
- Micro Electronic Mechanical Switches (MEMs)
- MMW Antennas, Transmitters, and Passive Components
- MMIC Design and Applications

SAR / ISAR / IFSAR Systems, Techniques, Processing, & Applications

- Wide Area Surveillance
- Detection, Tracking, and Identification
- FOPEN
- Surveillance in the Presence of Extremely High Clutter
- Tomographic Techniques and Applications
- Spectral Estimation Techniques and Applications

Antenna Technologies & Techniques

- Tunable and Reconfigurable RF Circuits
- Antennas for MIMO Applications
- Integrated Transceiver Design, Fabrications, and Applications

Signal & Data Processing (Theory, Architectures, & Applications)

- Detection
- Tracking
- Identification
- Data Fusion
- Pulse Compression
- Waveform Diversity
- Spectral Estimation
- GMTI
- STAP
- MIMO
- Compressive Sensing
- CID

Emerging Solutions

- Modular Open System Approach (MOSA) modular designs – time of day control systems, packaging standards
- Noise Radar Technology
- Cognitive Radar
- Ultra-wideband Radar
- Bi- and Multi-Static Systems, Techniques, and Results
- Medical and Biometric Applications
- Ubiquitous Sensing and Public Policy

RADARCON 2012 Best Paper Fitting the Conference Theme

Paper Submission
October 14, 2011

Acceptance Notification
January 20, 2012

Final Papers
February 22, 2012

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New
Dates!