

RadarConf'23

2023 IEEE RADAR CONFERENCE

May 1 – May 5, 2023 // San Antonio Rivercenter // San Antonio, Texas, USA



A Fiesta of Radar Innovations

CALL FOR PAPERS

KEY DATES

20 September 2022
Special Session Proposals Due

21 November 2022
Paper Submission Due

30 October 2022
Tutorial Proposals Due

15 January 2023
Acceptance Notification

21 February 2023
Final Paper Submission Due

Aim & Scope

The 2023 IEEE Radar Conference will be held at the River Walk in San Antonio, Texas for the first time, jointly sponsored by the Aerospace & Electronic Systems Society (AESS) and the IEEE Lone Star Section, with significant support from the Southwest Research Institute (SwRI) and Army Futures Command (AFC). The 2023 conference will celebrate a Fiesta of Radar Innovations involving the latest radar technologies through plenary talks, special sessions, tutorials, and the radar summer school. San Antonio is located in the heart of Texas within the United States and is known for an eclectic mix of Mexican, German, French, and Old West cultures that combine to create an “only in San Antonio” experience.

Original papers describing significant advances in radar technologies, systems, applications, and techniques are sought. Prospective authors should prepare a 4–6 page full paper (including figures) using the IEEE format. Papers should be submitted no later than 21 November 2022. Submission instructions can be found at ieee-radarconf.org.

Particular topics of interest include, but are not limited to:

Radar Systems & Applications

- » Innovative designs for airborne, spaceborne, and shipborne radar
- » Imaging radar
- » Distributed radar
- » Air traffic radar
- » Automotive radar
- » Multi-function radar
- » Sense & avoid radar
- » Weather radar
- » Passive radar
- » Medical/Biological Sensing
- » Over-the-horizon radar

Radar Signal & Data Processing

- » STAP & adaptive processing
- » MIMO / frequency-diverse radar
- » Compressive sensing
- » SAR / ISAR processing
- » Array processing
- » Super-resolution techniques
- » Detection and false alarm improvements
- » Waveform diversity & design
- » Target tracking and fusion
- » Classification and identification
- » Simultaneous multiple beams

Sub-Systems and Components

- » Novel & advanced processing architectures
- » Software-defined radar
- » RF system-on-chip (RF-SoC),
- » Advanced components (e.g. GaN MMICs)
- » Real-time processing (FPGA, GPU)
- » T/R modules
- » Advanced receiver designs
- » Simultaneous transmit/receive architectures

Radar Phenomenology & Remote Sensing

- » Target and clutter estimation
- » Modeling
- » Atmospheric propagation and scattering phenomenology
- » Foliage / ground penetration
- » Multipath exploitation

Antenna Technology

- » Conformal arrays
- » Design for low sidelobe level
- » Ultra-wideband
- » Metamaterials
- » Multi-polarization
- » Frequency-diverse arrays
- » Simultaneous multiple beams

Emerging Radar Technologies

- » Cooperative radar systems (scheduling, networking, fusion)
- » Radar spectrum sharing
- » Cognitive radar
- » Fully digital phased array radar
- » Terahertz radar
- » Machine learning applications
- » Multi-spectral sensing

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The Venue

The 2023 IEEE Radar Conference will be held at the San Antonio Rivercenter Marriott that is located directly on the River Walk and opens onto a wide array of shopping, dining, and other entertainment options for attendees – all within easy walking distance of the hotel. The San Antonio River Walk, known as the “world’s largest hotel lobby,” offers a beautiful and historic setting for networking, exploring, and entertaining. It also serves as the city’s main hub, where locals and visitors alike get together to eat, shop, and catch up. Its shaded stone pathways wind along the gently flowing San Antonio River through the city center, linking myriad convention facilities, restaurants, shops, theaters, museums, and other attractions. The Museum Reach and Mission Reach sections extend north and south of downtown, allowing visitors to further explore the city by foot, bike, or canoe.

Tutorials

Tutorials will bookend the conference. Brief tutorial proposals should be submitted by 30 October 2022 to the Tutorial co-Chairs and must include title, outline, contact information, biography, and a description of the tutorial material to be distributed to participants.

Diversity, Equity, and Inclusion (DEI)

Diversity is critical to the health and longterm success of the radar S&T community! Join us as we transform our annual Women in Radar / Engineering event. Specifically, IEEE Radar is bringing a spotlight to Diversity, Equity, and Inclusion by examining what it means to be an inclusive leader in today’s research community.

