



Call for Papers

1st URSI Atlantic Radio Science Conference (URSI AT-RASC)

18 - 22 May 2015

ExpoMeloneras Convention Centre, Gran Canaria

The newly established triennial URSI Atlantic Radio Science Conference (URSI AT-RASC) is the 3rd URSI flagship conference besides the triennial URSI General Assembly and Scientific Symposium and the triennial AP-RASC conference (AsiaPacific Radio Science Conference).

This 1st URSI Atlantic Radio Science Conference will have an open scientific program composed of submitted papers within the domains covered by all ten Commissions of URSI:

- Commission A: Electromagnetic Metrology
- Commission B: Fields and Waves
- Commission C: Radiocommunication and Signal Processing Systems
- Commission D: Electronics and Photonics
- Commission E: Electromagnetic Environment and Interference
- Commission F: Wave Propagation and Remote Sensing
- Commission G: Ionospheric Radio and Propagation
- Commission H: Waves in Plasmas
- Commission J: Radio Astronomy
- Commission K: Electromagnetics in Biology and Medicine



Paper submission Deadline: December 15, 2014

Authors must submit an abstract (minimum of 250 words) electronically by December 15, 2014. Each registered author may present no more than two papers. Organizers of special sessions should send a request to the appropriate commission Chair(s) by October 18, 2014 - details are found on the URSI website. Detailed information on Paper Submission as well as Travel Information will become available through the URSI website: www.at-rasc.org in September 2014. Papers presented at this 1st URSI AT-RASC will be submitted for posting to IEEE Xplore.

In addition, there will be special programs for young scientists, a student paper competition and programs for accompanying persons.

Technical Programme Committee: Prof. P.L.E. Uslenghi, Chair; Prof. P.S. Cannon, Vice-Chair; Dr. W.R. Stone, Publications

Organizing Committee: Prof. P. Lagasse, Chair, Prof. P. Van Daele, Vice-Chair

Important deadlines

Paper submission
December 15, 2014

Notification
February 28, 2015

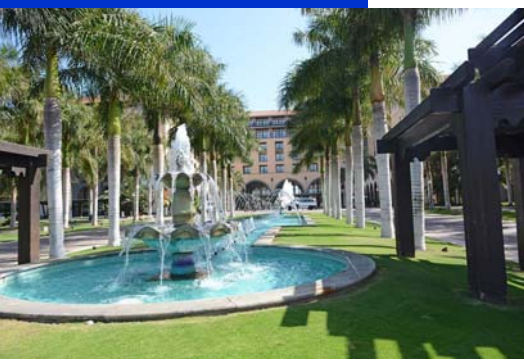
Early bird registration
March 31, 2015

Conference start
May 18, 2015



www.at-rasc.org

Contact:
uslenghi@uic.edu



Topics of interest



Commission A – Electromagnetic Metrology

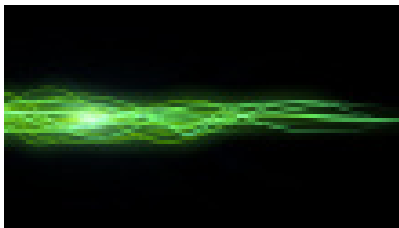
Antennas, Atomic-based mechatronics, Bioeffects and medical applications, EMC and EM metrology, High-frequency and millimeter wireless metrology,

Impulse radar, Interconnect and packaging, Materials, Measurements and calibration in propagation, Microwave to submillimeter measurements/standards, Noise, Quantum metrology and fundamental concepts, Space plasma characterization, Techniques for remote sensing, Test facilities, THz metrology, Time and frequency, Time-domain metrology and other topics of interest.

Commission B – Fields and Waves

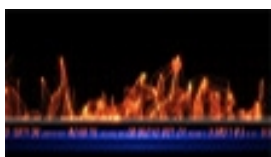
Antenna arrays, Antennas: recent advances and future outlook, Antenna theory, design and measurements, Cognitive radio, Complex media (bandgap structures, biological and geophysical media, metamaterials, and others),

Educational methods and tools, Electromagnetic interaction and coupling, Guided waves and waveguiding structures, High-frequency techniques, Imaging, inverse scattering and remote sensing, Mathematical modeling of electromagnetic problems, Microstrip antennas and printed



devices, Multiphysics electromagnetics, Nanoscale electromagnetics, Nonlinear electromagnetics, Numerical methods (differential- and integral-equation based, hybrid and other techniques), Optical phenomena, Optimization techniques in electromagnetics, Propagation phenomena and effects, Rough surfaces and random media, Scattering and diffraction, Theoretical electromagnetics, THz antennas and propagation, Transient fields, effects, and systems, Ultra-wideband electromagnetics, Wireless communications and other topics of interest.

Commission C – Radiocommunication Systems and Signal Processing



Cognitive radio and software defined radio, Distributed sensor networks and sensors array processing, Energy-efficient (“green”) communications, Information theory, coding, modulation and detection, MIMO and MISO systems, Novel radio

communication systems, Physics-based signal processing, Radar target detection, localization, and tracking, Radio localization and positioning, Signal and image processing, Spectrum and medium utilization, Statistical signal processing of waves in random media, Synthetic aperture and space-time processing, Wireless networking and other topics of interest.

Commission D – Electronics and Photonics

Broadband ubiquitous network, Energy harvesting in wireless systems, Fiber lasers and solid state lasers, Graphene nanoelectronics applications, Multi-physics modeling in radio frequency nanoelectronics, Optical sensors and biosensors, Plasmonics, RF MEMS and NEMS, Signal processing antennas, 60 GHz electronics,



Trends in RFID for identification and sensing, Trends in THz communications and other topics of interest.

Commission E – Electromagnetic Environment and Interference



Communication in the presence of noise, Crosstalk, Electromagnetic compatibility education, Electromagnetic compatibility measurements and standards, Electromagnetic noise of natural origin, Electromagnetic radiation hazards, High-

power effects of transients on electronic systems, Spectrum management and utilization and other topics of interest.

Commission F – Wave Propagation and Remote Sensing

Propagation measurements/models for fixed and mobile links, Measurements of fixed and mobile channels, Propagation models, Multipath/mitigation, Fixed terrestrial links: measurements and design strategies, Surface/atmosphere interaction, Dispersion/delay, Effects of natural/man-made structures, Outdoor to indoor propagation, Multi link MIMO channels, UWB channel characteristics, Small cell propagation, Remote sensing of the Earth/planets by radio waves, Passive sensing at millimeter wavelengths, Interferometry and SAR, Sensing of snow in open and forested environments, Remote sensing of precipitation, Atmospheric sensing, Sensing of soil moisture and biomass, Ocean and ice sensing, Urban environments, Radio Frequency Interference (RFI), Underground imaging, Propagation and remote sensing in complex and random media and other topics of interest.



Commission G – Ionospheric Radio and Propagation

Ionospheric imaging, Ionospheric morphology, Ionospheric modeling and data assimilation, Radar and radio techniques for ionospheric diagnostics, Space weather – radio effects, Transionospheric radio propagation and systems effects and other topics of interest.



Commission H – Waves in Plasma

Chaos and turbulence in plasma, Plasma instabilities and wave propagation, Spacecraft-plasma interactions, Solar/planetary plasma interactions, Wave-wave and wave-particle interactions, Waves in laboratory plasmas and other topics of interest.



Commission J – Radio Astronomy

Detection of short-duration transients, Developments in array technology for radio astronomy, New telescopes, techniques, and observations, Radio frequency interference mitigation and spectrum usage, SKA, Timely technical tutorials and other topics of interest.



Commission K – Electromagnetics in Biology and Medicine

Biological effects, Dosimetry and exposure assessment, Electromagnetic imaging and sensing applications, Human body interactions with antennas and other electromagnetic devices, Therapeutic, rehabilitative, and other biomedical applications and other topics of interest.

