



National Radio Science Meeting

◆ January 5-8, 2009 ◆ University of Colorado at Boulder
◆ www.nrsmboulder.org

This open scientific meeting is sponsored by the U.S. National Committee of the International Union of Radio Science (URSI). It is held in cooperation with the following IEEE organizations: Antennas and Propagation Society, Circuits and Systems Society, Communications Society, Electromagnetic Compatibility Society, Geoscience and Remote Sensing Society, Information Theory Society, Instrumentation and Measurement Society, Microwave Theory and Techniques Society, and the Nuclear Science Society. Papers on any topic in the interest area of a Commission are welcome. Contact the Commission Chairperson or visit the web site for further information.

Meeting Highlight: *Electromagnetism in Natural Plasmas: from the Upper Atmosphere to Space*

Contacts: John D. Sahr (Comm. G), jdsahr@u.washington.edu

William E. Amatucci (Comm. H), bill.amatucci@nrl.navy.mil

COMMISSION A, Electromagnetic Metrology

Ozlem Kilic, (202) 319-5261, kilic@cua.edu

TOPICS

Microwave to submillimeter measurements/standards
Quantum metrology and fundamental concepts
Time and frequency
Time domain metrology
EMC and EM pollution
Noise
Materials
Bioeffects and medical applications
Antenna
EM-field metrology
Impulse radar
Planar structures and microstrip circuits
Interconnect and packaging

COMMISSION B, Fields and Waves

Nader Engheta, (215) 898-9777, engheta@ee.upenn.edu

TOPICS

Antenna arrays
Antenna theory, design and measurements
Complex media (metamaterials, bandgap structures, biological and geophysical media, and others)
Educational methods and tools
Electromagnetic interaction and coupling
Guided waves and waveguiding structures
High-frequency techniques
Inverse scattering and remote sensing
Microstrip and printed devices and antennas
Nonlinear electromagnetics
Numerical methods (differential- and integral-eq. based, hybrid and other techniques)
Propagation phenomena and effects
Rough surfaces and random media
Scattering
Theoretical electromagnetics
Transient fields, effects, and systems
Ultra-wideband electromagnetics
Wireless communications

COMMISSION C, Signals and Systems

Dev Palmer, (919) 549-4246, dev.palmer@us.army.mil

TOPICS

Sensor array processing
Physics-based signal processing
Signal processing for radar remote sensing
Synthetic aperture and space-time processing
Distributed sensor networks
Computational imaging and inverse methods
Statistical signal processing of waves in random media
Radar target detection, localization, and tracking
Sensor array calibration

COMMISSION D, Electronics and Photonics

John Papapolymou, (404) 385-6004,
papapol@ece.gatech.edu

TOPICS

Electronic devices and applications
Photonic devices and applications
Physics, materials, CAD, technology and reliability of electronic and photonic devices, with particular reference to radio science and telecommunications.
Wide bandgap materials

COMMISSION E, Electromagnetic Noise and Interference

Danilo Erricolo, (312) 996-5771, erricolo@ece.uic.edu

TOPICS

High power electromagnetics
Effects of transients on electronic systems
Spectrum management and utilization
Communication in the presence of noise

**Abstract submissions
and
Student Prize Paper Competition submissions
are due by
October 10, 2008
These are FIRM DEADLINES**

COMMISSION F, Wave Propagation and Remote Sensing

Albin Gasiewski, (303) 492-9688,
al.gasiewski@colorado.edu

TOPICS

Point-to-point propagation effects:

<i>Measurements</i>	<i>Mobile/fixed</i>
<i>Modeling</i>	<i>Horizontal/slant paths</i>
<i>Mitigation</i>	<i>Interaction with the atmosphere</i>
<i>Land or water paths</i>	<i>Atmospheric constituents</i>
<i>Indoors/outdoors</i>	<i>Natural/man-made structures</i>

Remote sensing of the Earth by radio waves:

<i>Atmospheric sensing</i>	<i>Ocean and sea ice</i>
<i>Field campaigns</i>	<i>Interferometric & SAR</i>
<i>Subsurface</i>	<i>Scattering and propagation</i>
<i>Urban environments</i>	<i>Soil moisture & terrain</i>

COMMISSION G, Ionospheric Radio and Propagation

John D. Sahr, (206) 685-4816, jdsahr@u.washington.edu

TOPICS

Ionospheric imaging
Ionospheric morphology
Ionospheric modeling and data assimilation
Transionospheric radio propagation/systems effects
Radar and radio techniques for ionospheric diagnostics
Space weather - radio effects

COMMISSION H, Waves in Plasma

William E. Amatucci, (202) 404-1022,
bill.amatucci@nrl.navy.mil

TOPICS

Plasma instabilities
Generation and propagation of waves in plasmas
Interaction between these waves, and wave-particle interactions
Plasma turbulence processes and chaos
Spacecraft-plasma interactions
Application of the results, particularly in the areas of solar/planetary plasma interactions, and the increased exploitation of space as a research laboratory

COMMISSION J, Radio Astronomy

James M. Cordes, (607) 255-0608,
cordes@astro.cornell.edu

TOPICS

Submillimeter and THz technology for radio astronomy
Focal plane array technology
Challenges and new algorithms for interferometric imaging
New interferometric calibration techniques
Radio astronomy teaching laboratories and instruments

COMMISSION K, Electromagnetics in Biology and Medicine

Susan C. Hagness, (608) 265-5739,
hagness@enr.wisc.edu

TOPICS

Biological effects
Biomedical applications
Dosimetry
Exposure assessment
Applications of RF to medicine

STUDENT PRIZE PAPER COMPETITION

Prizes will be awarded to three graduate student papers. Awards will be made for First Prize in the amount of \$1000, Second Prize at \$750, and Third Prize at \$500. The deadline for submission of papers for consideration is **October 10, 2008**. Papers should be submitted electronically as PDF documents to Prof. Danilo Erricolo, Dept. of ECE, University of Illinois at Chicago, e-mail: erricolo@ece.uic.edu. Please see the web site for additional information. Student papers and awards will be presented at the Plenary Session on Wednesday morning, January 7, 2009.

SESSIONS

All sessions are listed at <http://www.nrsmboulder.org>

ABSTRACT SUBMISSION

The organizers of this meeting require the use of electronic submission. Details and instructions may be found on the web site. If you have any questions, please direct them to christina.patarino@colorado.edu. Abstracts must be a *minimum of 250 words*. You will not be able to submit an abstract that does not meet the minimum length requirements. See the web site for complete submission instructions. All abstract submission information must be entered on-line by **October 10, 2008**. Please find the link to abstract submission at <http://www.nrsmboulder.edu>.

Questions should be directed to:

For abstract submission, logistics (including travel and lodging), and the conference program:
Phone: (303)492-5151, Fax: (303)492-5959, E-MAIL: christina.patarino@colorado.edu