



# National Radio Science Meeting

◆ January 4-7, 2006 ◆ University of Colorado at Boulder  
◆ <http://cires.colorado.edu/ursi>

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 and its Wave Propagation Standards Committee, 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: ***Spectrum Management***

Contacts: Karen St.Germain (Comm. F), [karen.stgermain@noaa.gov](mailto:karen.stgermain@noaa.gov)  
Andrew Clegg (Comm. J), [aclegg@nsf.gov](mailto:aclegg@nsf.gov)

## COMMISSION A, Electromagnetic Metrology

Vijay Nair, (503) 712-6122, [v.nair@ieee.org](mailto:v.nair@ieee.org)

### 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

David R. Jackson, (713) 743-4426, [djackson@uh.edu](mailto:djackson@uh.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](mailto: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

L. Wilson Pearson, (864) 656-3946,  
[pearson@ces.clemson.edu](mailto:pearson@ces.clemson.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

Cynthia Ropiak, (410) 903-2907, [cropiak@earthlink.net](mailto:cropiak@earthlink.net)

### 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  
September 18, 2005  
These are FIRM DEADLINES**

## COMMISSION F, Wave Propagation and Remote Sensing

Roger Lang, (202) 994-6199, lang@gwu.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 &amp; SAR</i>
<i>Subsurface</i>	<i>Scattering and propagation</i>
<i>Urban environments</i>	<i>Soil moisture &amp; terrain</i>

## COMMISSION G, Ionospheric Radio and Propagation

John D. Mathews, (814) 865-2354, jdm9@psu.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

Meers Openheim, (617) 353-6139, meerso@bu.edu

### 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

David P. Woody, (760) 938-2075 ext. 111, dpw@ovro.caltech.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

Gianluca Lazzi, (919) 513-3685, lazzi@eos.ncsu.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 **September 18, 2005**. Papers should be submitted electronically as PDF documents to Prof. Steven C. Reising, Dept. of ECE, Colorado State University, e-mail: steven.reising@colostate.edu. Please see the web site for additional information. Student papers and awards will be presented at the Plenary Session on Thursday morning, January 5, 2006.

## SESSIONS

All sessions are listed at <http://cires.colorado.edu/ursi>.

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## 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 [kristine.grosland@colorado.edu](mailto:kristine.grosland@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 **September 18, 2005**. Please find the form on our web site at <http://cires.colorado.edu/ursi>.

## Questions should be directed to:

For abstract submission, logistics (including travel and lodging), and the conference program:

Fax: (303)492-5959, E-MAIL: [kristine.grosland@colorado.edu](mailto:kristine.grosland@colorado.edu)

**WEB SITE:** <http://cires.colorado.edu/ursi>