



# NATIONAL RADIO SCIENCE MEETING

◆ January 4-8, 2004 ◆ 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.

## COMMISSION A, Electromagnetic Metrology

William Davis, (540) 231-6307, wadavis@vt.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

Ronald Pogorzelski, (818) 354-3835, pogo@jpl.nasa.gov

### TOPICS

*Advanced materials for EM applications*  
*Antennas*  
*Arrays*  
*Complex media effects*  
*Education*  
*Guided waves*  
*High frequency techniques*  
*Interaction and coupling*  
*Inverse scattering*  
*Microstrip devices and antennas*  
*Nonlinear electromagnetics*  
*Numerical methods (differential and integral equations, and others)*  
*Rough surfaces and random media*  
*Scattering*  
*Theoretical electromagnetics*  
*Transient fields, effects, and systems*  
*Ultra-wideband electromagnetics*  
*Wireless communications*

## COMMISSION C, Signals and Systems

Jeffrey Krolik, (919) 660-5274, jk@ee.duke.edu

### 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

Samir El Ghazaly, (865) 974-3461, el-ghazaly@utk.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.*

## COMMISSION E, Electromagnetic Noise and Interference

Ira Kohlberg, (703) 578-2744, ikohlber@ida.org

### TOPICS

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

**Abstract submissions are due by**

**September 19, 2003**

**This is a FIRM DEADLINE. No abstracts will be accepted after this date. Submissions to the Student Prize Paper Competition are due by**

**August 29, 2003**

## COMMISSION F, Wave Propagation and Remote Sensing

Kenn Anderson, (619) 553-1420, kenn@spawar.navy.mil

### TOPICS

#### Point-to-point propagation effects:

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

#### Remote sensing of the Earth by radio waves:

Theory	Atmosphere
Field campaigns	Atmospheric constituents
Interior	Natural features or inhabitants
Surface	

## COMMISSION G, Ionospheric Radio and Propagation

Anthea Coster, (781) 981-5658, coster@ll.mit.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

Gurudas Ganguli, (202) 767-2401,

gang@ppdmail.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

John Carlstrom, (773) 834-0269, jc@nanaka.uchicago.edu

### TOPICS

*Radio astronomy beyond the Epoch of Reionization*  
*Correlators for Radio Astronomy*  
*Advances in Large Focal Plane Arrays I: Bolometric Detectors*  
*Advances in Large Focal Plane Arrays II: Coherent Detectors*  
*New Science and Technical Developments from the Green Bank Telescope*  
*Experimental challenges for CMB Polarization Measurements*

## COMMISSION K, Electromagnetics in Biology and Medicine

Om Gandhi, gandhi@ee.ece.utah.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 **August 29, 2003**. Papers should be submitted to Prof. Steven C. Reising, ECE Dept., 113B Knowles Engineering Building, University of Massachusetts, Amherst, MA 01003-4410, USA. E-Mail: reising@ieee.org. Please see <http://cires.colorado.edu/ursi> for more information. Student papers and awards will be presented at the Plenary Session on Wednesday morning, January 7, 2004.

## 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 [ursi@cires.colorado.edu](mailto:ursi@cires.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 19, 2003. Please find the form on our web site at <http://cires.colorado.edu/ursi>.

## Questions should be directed to:

Fax : (303) 492-1149, E-MAIL: [ursi@cires.colorado.edu](mailto:ursi@cires.colorado.edu)

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