



# 2004 IEEE International Ultrasonics, Ferroelectrics and Frequency Control 50<sup>th</sup> Anniversary Conference



Short Courses & Tutorials on 23 August, Conference 24-27 August 2004  
Palais des Congrès, Montréal, Canada

*Sponsored by the IEEE Ultrasonics, Ferroelectrics & Frequency Control Society*

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## Call for Papers

*Abstract Deadline February 24, 2004*

The joint conference of the three groups which form the IEEE Ultrasonics, Ferroelectrics and Frequency Control Society marks the 50<sup>th</sup> anniversary of the Society. This conference will offer an unprecedented opportunity for technical interchange between members of the three groups in the exciting and hospitable city of Montréal.

Papers are solicited describing original technical work in the fields of ultrasonics, ferroelectrics and frequency control. In addition, special consideration will be given to presentations containing subject matter relevant to two or more of the Ultrasonics, Ferroelectrics and Frequency Control groups, including surveys and reviews. The conference organizers solicit historical reviews of the evolution of relevant technology. Both poster and oral presentation formats will be used at the Conference. Prospective authors should note that poster sessions provide an alternative format which allows for greater flexibility and expanded audience interaction as the oral presentations are 15 minutes (30 minutes for invited oral talks) in duration.

Each abstract will receive careful review and evaluation by the Symposium Technical Program Committees. Evaluation criteria will include overall interest to the technical community, originality of the work, and contribution to the state-of-the-art. Papers are solicited from the subject classifications shown at the end of this announcement.

**Abstract submission:** Check the conference web site for details on electronic abstract submission; the abstracts must be submitted according to the specific information which is posted on the conference web page. Submissions not compliant with these requirements will not be considered.

**Conference Location:** The Joint Conference will be held at the Palais des Congrès, Montréal's convention center centrally located in downtown Montréal with nearby hotels, cafes, restaurants and shops. See [www.tourism-montreal.org](http://www.tourism-montreal.org) for general information about Montréal and [www.congresmtl.com](http://www.congresmtl.com) for information about the Palais des Congrès.

**Hotels:** Reservations at nearby hotels can be made through the Montréal Housing Bureau; the cutoff date for reservations is July 18, 2004. Check the conference web site for links to the Bureau.

**Conference Web Site:** Information about the Conference is available on the Conference Web site; information will be updated and added as it becomes available. Please see [www.ieee.org/UFFC-2004](http://www.ieee.org/UFFC-2004)

**Travel support:** Limited funds are available to support students and foreign authors. Awards will be made on a competitive basis. Further information will be posted on the conference web site.

**Student Paper Competition:** Students submitting abstracts for presentation are invited to participate in a student paper competition. To participate the student has to be the lead author and present the paper. Winners will receive a cash award. Further information will be posted on the conference web site.

**Awards:** The Awards Chair solicits nominations for a) the Ferroelectrics Achievement Award; b) the Ultrasonics Rayleigh Award; and c) the Frequency Control Cady, Rabi, Sawyer Awards. Please see the individual Ferroelectrics, Ultrasonics and Frequency Control Websites for award criteria.

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## Ultrasonics

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### Group 1 Medical Ultrasonics

UMBB Medical Beamforming and Beam Steering  
UMBE Biological Effects & Dosimetry  
UMBF Blood Flow Measurement  
UMCA Contrast Agents  
UMEL Elastography  
UMIM Medical Imaging  
UMSP Medical Signal Processing  
UMTC Medical Tissue Characterization  
UMTH Therapeutics, Hyperthermia, Ultrasound in Surgery

### Group 2 Sensors, NDE & Industrial Applications

UNAM Acoustic Microscopy & Imaging  
UNAS Acoustic Sensors  
UNDE General NDE Methods  
UNMC Material & Defect Characterization

UNPM Wave Propagation  
UNSP Signal Processing  
UNTD Transducers: NDE and Industrial

### Group 3 Physical Acoustics

UPBW Bulk Wave Effects & Devices  
UPGP General Physical Acoustics  
UPMI Magnetic Interactions  
UPOI Optical Interactions  
UPUM Ultrasonic Motors & Actuators

### Group 4 Surface Acoustic Waves

USAO SAW Acoustoelectric Effects & Devices  
USDO SAW Devices & Oscillators  
USFT SAW Filters & Transducers  
USMP SAW Materials & Propagation  
USSA SAW System Applications  
USSP SAW Signal Processing  
USTD SAW Thin-Films & Devices

### Group 5 Transducers & Transducer Materials

UTFA Transducer Modeling (FEA and Analytical)  
UTFT Transducer Fabrication Technology  
UTMC Transducer Material Characterization and Modeling  
UTMM Materials/Technology for Medical Transducers  
UTMT Medical Transducers  
UTMU Micromachined Ultrasound Transducers  
UTPF Piezoelectric and Ferroelectric Transducer Materials

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## Ferroelectrics

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### Group 1 (FE1):

Piezoelectrics & Relaxors  
Single Crystal Technology  
Dielectrics  
Pyroelectrics  
Lead Free Piezoelectrics

### Group 2 (FE2):

Characterization  
Degradation and Reliability  
Thin films  
Fundamentals, Domains, Theory, and Models

### Group 3 (FE3):

FeRAM and Devices  
Device Integration  
Extreme Environment Electronic Components  
Optics

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## Frequency Control

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### Group 1 (FC1):

A. Fundamental Properties of Materials  
B. Theory and Design of Resonators and Filters

### Group 2 (FC2)

A. Oscillators - BAW and SAW  
B. Oscillators - Microwave to Optical  
C. Synthesizers and Other Circuitry  
D. Noise Phenomena and Aging

### Group 3 (FC3)

A. Atomic Frequency Standards  
B. Frequency and Time Coordination  
C. Measurements and Specifications  
D. Applications of Frequency Control  
E. Optical Frequency Standards

### Group 4 (FC4)

A. Resonant Chemical Sensors  
B. Resonant Physical Sensors  
C. BAW, SAW Sensors  
D. Transducers

### Group 5 (FC5)

Manufacturing Technology