



## CALL FOR PAPERS

### IMPORTANT DATES

**Friday, April 12, 2024**

Abstract Submission Deadline

**Monday, June 10, 2024**

Author Notification

**Sunday, September 22**

Short Courses

**Monday, September 23 –  
Thursday, September 26**

Technical Program

### ORGANIZING COMMITTEE

#### General Co-Chairs

**Pai-Chi Li**

National Taiwan University

**Wan-Thai Hsu**

Soundskritt

#### Technical Program Chair

**Susan Trolier-McKinstry**

Pennsylvania State University

#### Technical Program Co-Chair (Ultrasonics)

**Marvin Doyley**

University of Rochester

#### Technical Program Co-Chair (Ferroelectrics)

**Uwe Schroeder**

NaMLab gGmbH

#### Technical Program Co-Chair (Frequency Control)

**Laura Sinclair**

NIST

#### Technical Program Co-Chair (PFM)

**Andrei Kholkin**

University of Aveiro

The 2024 IEEE Ultrasonics, Ferroelectrics, and Frequency Control Joint Symposium will take place September 22 – 26, 2024 at the Taipei Nangang Exhibition Center in Taipei, Taiwan. This joint conference celebrates the 70th anniversary of the IEEE UFFC Society.

The following conferences will be involved:

- » International Ultrasonics Symposium (IUS)
- » International Symposium on Applications of Ferroelectrics (ISAF)
- » International Frequency Control Symposium (IFCS)
- » Piezoresponse Force Microscopy Workshop (PFM)

### Video Submission

All authors will be required to submit a pre-recorded video of their presentation by September 12, 2024. The content in your video may be modified for your live presentation. There's no need to include any details that are confidential or that you prefer not to disclose.

### Topics

#### IUS

- Group 1: Medical Ultrasonics
- Group 2: Sensors, NDE & Industrial Applications
- Group 3: Physical Acoustics
- Group 4: Microacoustics – SAW, FBAR & MEMS
- Group 5: Transducers & Transducer Materials

#### ISAF

- Group 1: Fundamentals and Theory of Ferroelectrics and Related Materials
- Group 2: Processing of Ferroelectrics Crystals, Ceramics, Thick & Thin Films
- Group 3: Characterization & Properties of Ferroelectrics
- Group 4: Applications of Ferroelectrics, Piezoelectrics and Related Materials

#### IFCS

- Group 1: Materials, Resonators and Resonator Circuits
- Group 2: Oscillators, Synthesizers, Noise and Circuit Techniques
- Group 3: Microwave Frequency Standards and Applications
- Group 4: Sensors and Transducers
- Group 5: Timekeeping, Time and Frequency Transfer, GNSS Applications
- Group 6: Optical Frequency Standards and Applications

#### PFM

- » Instrumental aspects of PFM, ESM, SS-PFM and related techniques
- » Nanoelectromechanics of materials and PFM/ESM theory
- » Ferroelectric tunnelling and memristor effects characterized by PFM/ESM
- » Multiferroic phenomena on the nanoscale
- » Disordered ferroelectrics and mesoscopic effects by PFM
- » Ferroelectric data storage and polarization lithography
- » Ionic conductors, battery materials and fuel cells on the nanoscale
- » Ferroelectric photovoltaics and tip-enhanced phenomena
- » Ferroelectric semiconductors and surface phenomena
- » Interface engineering via PFM
- » Biocompatible & organic polar materials on the nanoscale
- » 1D and 2D nanostructured materials via PFM

### Student Paper Competition and Travel Support

Students submitting abstracts are invited to participate in a student paper competition. To participate, the student must be the lead author and present their paper. Limited funds are available to support travel for IEEE UFFC student member attendees at the 2024 symposium. Awards will be given on a competitive basis.

## Joint Sessions

### Frequency Control, Ferroelectrics

- » Al, ScN for piezoMEMS, resonators, ferroelectrics
- » Optics – photonic integrated circuits, including materials, on chip optical isolators

### Ultrasonics, Ferroelectrics

- » Materials development for ultrasound transducers (catheters, microbubble, functional ultrasound...) Include industry, clinical ideas, new processing technologies

### Piezoresponse Force Microscopy, Ferroelectrics

- » Domain studies in ferroelectrics

### Ultrasonics, Ferroelectrics, Frequency Control

- » PMUT
- » Influence of new processing routes on devices
- » Automated experimentation and machine learning

### Frequency Control, Ultrasonics

- » Noise of device; low noise sources
- » Acoustic metasurfaces
- » MEMS resonators
- » Noise analysis from the RF to the optical
- » Advances in ultrasonics, ferroelectrics and frequency control for 6G and beyond
- » THz sensing and generation
- » Attosecond science

## Committee

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NIST

### Technical Program Co-Chair (PFM)

- Andrei Kholkin**  
University of Aveiro

### WIE Chair

- Azadeh Ansari**  
Georgia Institute of Technology

### Tutorial Chairs

- Ultrasonics:**  
**Wei-Ning Lee**  
University of Hong Kong

### Ferroelectrics:

- Neus Domingo**  
ORNL

### Frequency Control:

- Archita Hati**  
NIST

### Exhibition Chairs

- Overall:**  
**Ken-ya Hashimoto**  
University of Electronic Science and Technology of China

### Ultrasonics:

- Yiliu Wang**  
Skyworks

### Ferroelectrics:

- Andrew Bell**  
University of Leeds

### Frequency Control:

- Ernest Yen**  
TI

### Finance Chairs

- Debra Coler**  
OEwaves, Inc.
- Dan Stevens**  
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### Web and IT Chair

- Che-Chou Shen**  
National Taiwan University of Science and Technology

### Award Chairs

- Ultrasonics:**  
**Jafar Saniie**  
Illinois Institute of Technology

### Ferroelectrics:

- Fei Li**  
Xi'an Jiaotong University

### Frequency Control:

- James Camparo**  
The Aerospace Corporation

### Publication Chairs

- Ultrasonics:**  
**Steven Freear**  
University of Leeds

### Ferroelectrics:

- Brendan Hanrahan**  
DEVCOM U.S. Army Research Laboratory

### Frequency Control:

- Roozbeh Tabrizian**  
University of Florida

### Local Chair

- Sheng-Shian Li**  
National Tsing Hua University

### Diversity & Inclusion Chair

- Hong Wang**  
Southern University of Science and Technology