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IEEE ULTRASONICS, FERROELECTRICS,  
AND FREQUENCY CONTROL SOCIETY  
— Newsletter —



## UFFC-S Newsletter - January 2024

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### Message from the UFFC-S President

The Society is leaving behind a challenging period, skillfully navigated by former presidents Paul Reynolds and Mark Schaffer. The introduction of the Volunteers Engagement Committee has significantly strengthened the Society's operations. The continued policy of remote access to our flagship conferences has enabled colleagues who could not participate in person for various reasons to present their work; in 2023, remote participation rate reached approximately 20 to 30%.

[Read More](#)

## IEEE UFFC Distinguished Lecturer Final Report: 2021-2023



**Title:** Precision Metrology with Photons, Phonons, and Spins: Answering Major Unsolved Problems in Physics and Advancing Translational Science

**By:** Prof. Michael Edmund Tobar, The University of Western Australia

Prof. Tobar's distinguished lecture term of office was from July 2021 to December 2022, however, because of the pandemic, he got off to a late start, with the first one given at the University of Tasmania in December 2021. His term of office was extended through to 2023 due to the pandemic, and he managed to give 30 lectures across Asia, Europe, and America, despite the pandemic, with the final one delivered at ETH Zürich, in December 2023.

[Read More](#)

## IEEE Microsystems Boston Chapter: A Year of Inauguration and Collective Synergy

The IEEE Microsystems Boston chapter, founded as a joint chapter of the IEEE UFFC Society and the IEEE Sensors Council, experienced a vibrant inaugural year. Characterized by engaging events, the chapter demonstrated a strong commitment to fostering collaboration and facilitating knowledge exchange within the microsystems community in the New England region of USA. Let's take a closer look at some of the key highlights from their impactful year.

[Read More](#)

## WULPUS: An Open-source Wearable Ultra - Low Power UltraSound probe

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their flagship wearable ultrasound system, WULPUS, with the research community using a permissive open-source license. The release includes full PCB design with components, layout, schematics in Altium, the firmware, and program examples for the MSP430 and nRF52832 Microcontrollers and is available under: <https://github.com/pulp-bio/wulpus>

WULPUS, first presented at IUS2022, is a truly wearable ultra-low-power open research ultrasound platform (see our related publications below) and has been used in applications that include: carotid arteries monitoring, muscle thickness tracking, concurrent heart and respiration rate monitoring, hand gesture recognition, coupling with wearable electromyography sensors.

[Read More](#)

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## UFFC Member Receives Recognition for Breakthrough Device

A device from Dr. Hong Chen's groups at Washington University that is based on the "sonobiopsy" technique receives "breakthrough device" recognition from the Food and Drug Administration (FDA), USA. The device, called NeuroAccess, developed by Cordance Medical Inc. under a technology licensing agreement allows for blood-based liquid biopsies in a non-invasive fashion of patients who have known or suspected brain tumors. This holds promise for physicians to avoid high-risk brain surgery.

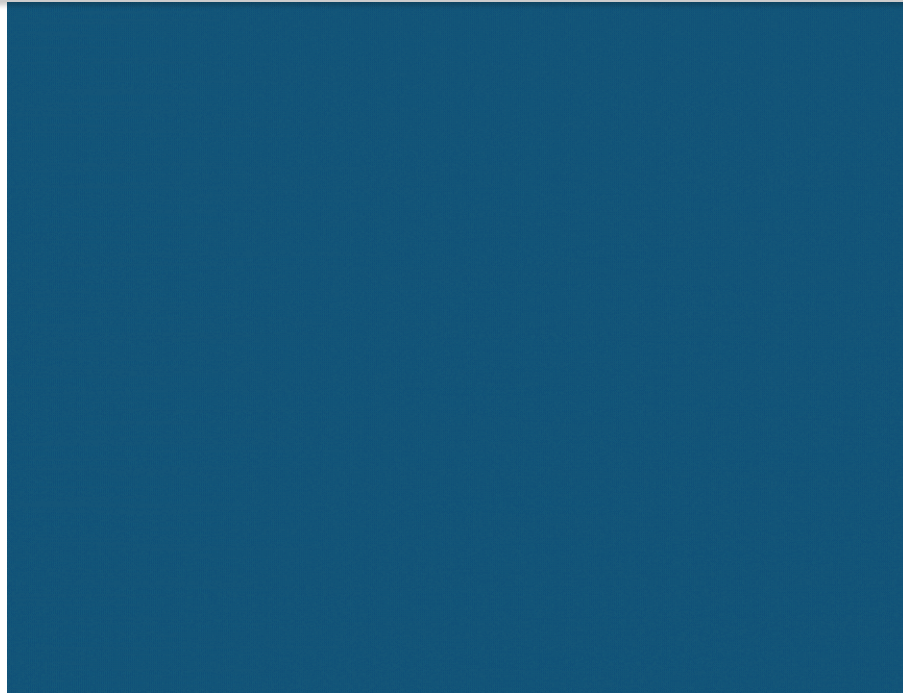
[Read Full Article](#)

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## UFFC SOCIETY UPDATES

### IEEE UFFC-S Launches CATAVault



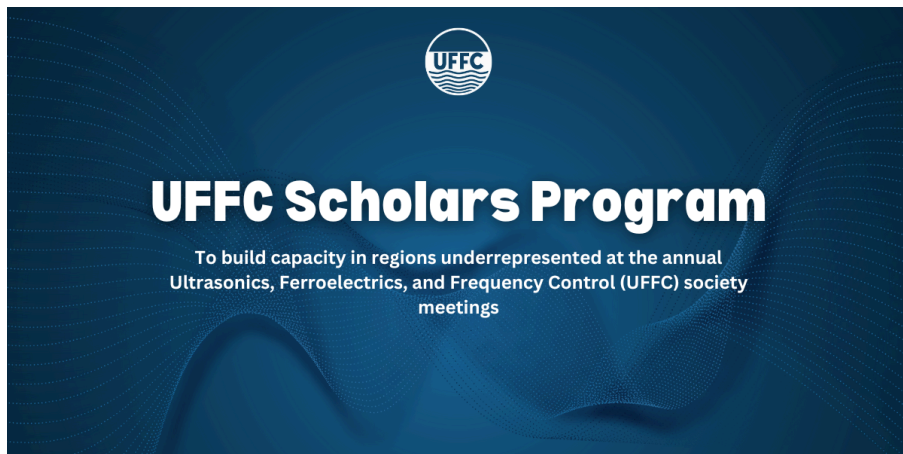
CATAVault is the cutting-edge UFFC-S (Ultrasonics, Ferroelectrics, and Frequency Control Society) video library, revolutionizing the way educational content is delivered to the global community of researchers, professionals, and students. With an extensive collection of webinars, tutorials, conference presentations, and more, CATAVault is designed to empower individuals with an immersive learning experience in the fields of ultrasonics, ferroelectrics, and frequency control.

[Visit IEEE UFFC CATAVault](#)

[Reset Password](#)

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## UFFC Scholars Program



America, the Caribbean, Africa, and Southeast Asia. High travel costs, high registration costs, visa/entry challenges, and a requirement of an accepted paper for home institution support or travel grants combine to produce low involvement year after year. This year, the UFFC seeks to remove potential barriers for three UFFC scholars to increase attendance at the annual UFFC society meetings as a stepping stone to building a truly international UFFC society. As the end goal is building capacity across the world, the UFFC Scholars program is open to individuals who will build capacity in their home country over many years.

### Program Information

- Three UFFC Scholars will be selected, one each from Ferroelectrics, Frequency Control, and Ultrasonics.
- Full in-person conference registration including the tutorial day will be covered (waived at the time of registration).
- Full travel costs will be covered up to a maximum of \$5000 USD. This will include:
  - Travel to/from the conference venue (flights/trains/buses/taxis)
  - Lodging at the conference hotel or other nearby hotel
  - Per diem for food based on publicly available estimates from either the U.S. State Department ([https://aoprals.state.gov/web920/per\\_diem.asp](https://aoprals.state.gov/web920/per_diem.asp)) or the U.S. General Services Administration (<https://www.gsa.gov/travel/plan-book/per-diem-rates>)

For more information on the UFFC Scholar Program, including application details, please visit the link below:

### UFFC Scholar Program Details

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## Ongoing Calls for Volunteers



UFFC-S is seeking dedicated volunteers to offer their time and service in positions within the IEEE Ultrasonics, Ferroelectrics, and Frequency Control Society.

If you are a committee chair and would like to submit an open volunteer application to be posted on the Volunteer Opportunities page, please click [here](#).

[Visit the UFFC-S Volunteer Opportunities Page](#)

## Featured Volunteer Opportunities

**Position Title:** TPC Committee Member

**UFFC-S Committee:** IEEE UFFC-S IUS Technical Program Committee Groups 1-5

**Experience Level:** Experienced Professional

### Position Description:

The IEEE UFFC-S International Ultrasonics Symposium Technical Program Committee (TPC) plays a key role in the organization of the UFFC Society's premier meeting, the [IEEE International Ultrasonics Symposium](#). As part of this process, TPC members actively contribute to a number of operations. Key activities include objective reviews of abstract submissions, selection of invited speakers, organization of the student paper competition, assembly of the conference program schedule, and planning of special sessions.

There are five TPC groups categorized by technical expertise. This call is seeking new members to join the TPC groups 1-5. Applications will be accepted until **12 January 2024**. We are particularly interested in candidates who will bring expertise to one or more of the Ultrasonics technical disciplines for TPC groups 1-5 (shown here) and those who will show a strong commitment to contribute to the IEEE UFFC IUS and various committee operations.

improving the balance between male/female, and industry/academia representatives as well as to improve geographic diversity and coverage among TPC members. Candidates will be informed of the results by the **31 January 2024**.

**Selection Criteria:**

***Essential***

- Previous experience of attendance, presenting, and/or technical contribution at international conferences
- Demonstration of knowledge and profession in their field through conferences, journal publications, and patents.
- A Ph.D. and 5+ years of experience, or equivalent, in a field related to UFFC-S
- IEEE UFFC-S membership

***Desirable***

- Prior service and engagement in the UFFC-S activities

[See Technical Disciplines and Apply Here](#)

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## **Award Nominations**



The **Ultrasonics, Ferroelectrics, and Frequency Control Society** is now accepting nominations for the 2024 Society and all Technical Committee Awards.

Award Submission Deadline: **Friday, 15 March 2024**

To nominate yourself or a colleague, please see the requirements below:

### Nomination Form

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## Senior Membership

**If you have 10+ years of work or research experience, you can apply for Senior Membership!**

Senior membership is not just a recognition of your experience in the community, but also makes you eligible for executive IEEE volunteer positions, allows you to sit on review boards, and makes you eligible for fellowship.

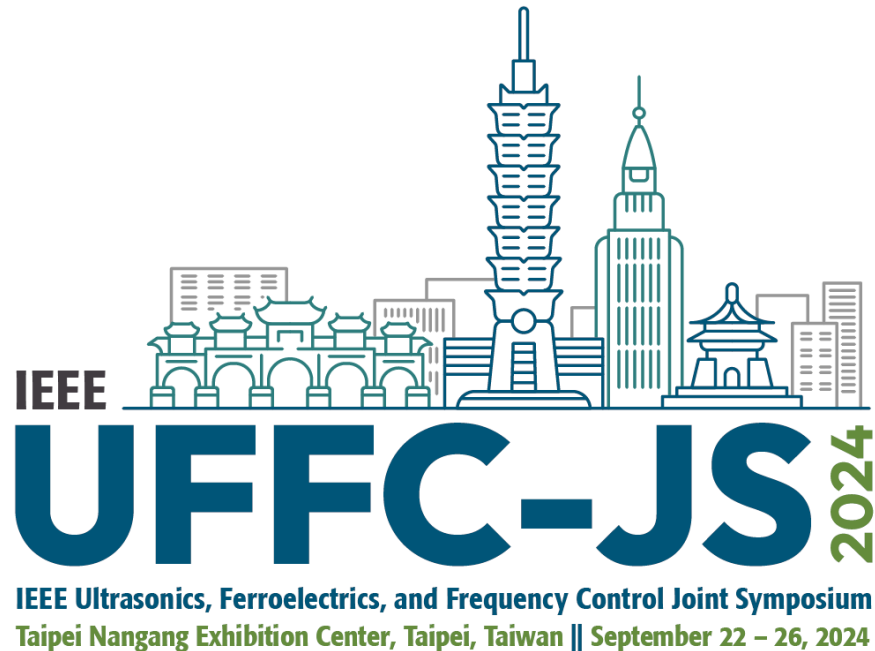
Full IEEE members with 10 years of professional experience, including credit for degree programs are eligible to apply for senior membership. You can receive 3 years of credit for a bachelor's degree, 4 for a master's, and 5 for a PhD towards this requirement. UFFC-S encourages all eligible members to apply for senior membership.



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## SYMPOSIA



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.

For more information, please visit the UFFC-S website below.

[2024 UFFC Joint Symposium](#)

[Call Document](#)

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## [2024 IEEE South Asian Ultrasonics Symposium](#)



 : 27 March 2024 – 29 March 2024

 : Gandhinagar, Gujarat, India

The IEEE SAUS 2024 has received an overwhelming response with 97 abstracts received from across the world thus far, with 3 keynote talks and several invited speakers who will be attending SAUS in person. SAUS will be attended by academic researchers, industry professionals, and clinicians. The submission deadline for late-breaking abstracts is extended to **8th January 2024**. More details can be accessed below on the SAUS website.


[SAUS 2024 Website](#)

[Call Document](#)

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## 2024 IEEE UFFC Latin America Ultrasonics Symposium



 : 8 May 2024 – 10 May 2024

 : Montevideo, Uruguay

**LAUS 2024 Welcomes your abstract until 10 January!**

deadline for abstract submissions until 10 January 2024. This prestigious event, taking place in Montevideo, Uruguay, from 8-10 May 2024, promises a symphony of groundbreaking ideas and collaboration across borders and disciplines.

Take advantage of this opportunity to showcase your research on a global platform and elevate your profile within the esteemed ultrasonics and acoustics community. This will be an opportunity to engage with leading experts from Latin America and beyond while immersing yourself in the latest advancements in the field and learning the research interests of the region.

LAUS 2024 welcomes submissions across a diverse spectrum of sonic threads, including:

- Group 1 – Biomedical and Clinical Ultrasonics
- Group 2 – Nondestructive Evaluation and Industrial Applications
- Group 3 – Transducers, Sensors and Actuators
- Group 4 – Physical Acoustics
- Group 5 – Acoustofluidics, microacoustics – SAW, FBAR, MEMS

Don't miss this extended opportunity! Please submit your abstract by **10 January 2024**, and join us in Montevideo. Visit the LAUS 2024 website for more details and submission guidelines

[LAUS 2024 Website](#)

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## IEEE Life Members Conference



We are excited to announce the inaugural Life Member Conference, designed to strengthen the engagement of IEEE's 38,000 Life Members in shaping our collective future. Life Members represent all disciplines across the IEEE's fields of interest. We are also dedicated to giving back and sharing our expertise with the next generation.

📍: Hyatt Regency, Austin, Texas

**The conference has three tracks:**

**1. Emerging Technologies – that impact seniors**

- Technologies of the Future and the Next Chapter
- Aging Society and Technology Progress
- Renewable Energy and Sustainability

**2. Applications – technologies used by aging populations**

- Financial and Investment Strategies
- Smart Systems, Infrastructure, Equipment, and Living

**3. Contributions – members sharing resources with future leaders**

- Mentors and Influencers in the Modern Society
- Professional Development, Sharing, and STEM Education

[Life Members Website](#)

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## EDUCATION

### 2023 4th Ferroelectric School in Xi'an, China - Recap



The 2023 4th Ferroelectric School in Xi'an, China was successfully closed recently. There were 14 lecturers, 2 journal editors, and 2 technical managers that gave tutorial lectures and brief introductions.

More than 40 sponsored students from 6 different countries and regions were able to attend. Each sponsored student presented their poster during the poster

students, there were 60 students from Xian Jiaotong University and 80 students from 5 online branch meeting rooms that attended the school.

UFFC-S thanks each volunteer involved for their best efforts in making this educational opportunity possible. To see more of what the school entailed and photos from the activities please see the links below.

[View Program](#)

[View Photos](#)

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## Summer School on Frequency Standards, Precision, and Quantum Measurement - Recap



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The Summer School on Frequency Standards, Precision and Quantum Measurement was held on the Gold Coast on the 9–13 Oct 2023, followed by the 9<sup>th</sup> Symposium on Frequency Standards and Metrology, at Kingscliff on the 16-20 Oct 2023. Both events were a huge success and were chaired by UFFC IEEE Fellow, Prof. Michael Tobar.

[Read More About the Events](#)

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## PUBLICATIONS

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# ULTRASONICS, FERROELECTRICS, AND FREQUENCY CONTROL

[View the T-UFFC Current Issue](#)

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## Calls for Papers for Upcoming Spotlight Issues

### Insights and Opportunities in Ultrasound Imaging Algorithms

This Spotlight Issue will focus on innovative data processing techniques and algorithms, integration of ultrasound imaging with other modalities, and quantitative analysis of ultrasound images for improved diagnosis and monitoring of disease.

**Submission Deadline: 15 January 2024**

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### Breaking the Resolution Barrier in Ultrasound

This issue aims to collect original research, tutorials, full-length reviews, and perspective papers (mini reviews) to promote the publication and dissemination of a wide range of technical knowledge on the theme of super-resolution imaging and its associated preclinical and clinical applications.

**Submission Deadline: 31 May 2024**

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[View the T-UFFC Call Board](#)

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Publication

**IEEE Open Journal of Ultrasonics,  
Ferroelectrics, and Frequency Control Society**

[View the OJ-UFFC Current Volume](#)

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## Calls for Papers for Upcoming Special Issues

### Special Issue on Air-Coupled Ultrasound

systems and signal processing methods and their use in different applications

**Submission Deadline: 31 January 2024**

[View the OJ-UFFC Call Board](#)

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## An Interview with the VP of Publications



**Name:** Lori Bridal

**Lab/Institution/Company:** Laboratory of Biomedical Engineering, CNRS

**What you are currently working on at your lab/institute/job?:**

I am a CNRS (French National Centre for Scientific...

[Read More about Lori](#)

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## AWARDS

### Class of 2024 Fellows





### Alfred Yu

*for contributions to ultrasound imaging technology and therapy*

*Elevated by UFFC-S*



### Kui Yao

*for contributions to the development of advanced ferroelectric thin films and their sensor applications*

*Elevated by UFFC-S*

## More Information on Fellows

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## JOB MARKETPLACE

To advertise a job on the UFFC-S Job Marketplace, please submit the job information to our [IEEE UFFC Job Submission Form](#).

For any questions, please contact: [uffc-admin@conferencecatalysts.com](mailto:uffc-admin@conferencecatalysts.com).

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## KEEP IN TOUCH

### Please Tell Us Your Stories

Please contact any of the members of the UFFC-S newsletter team if you have news to share with the UFFC-S membership. We will get news onto the website as it occurs and include selected items in the quarterly highlight newsletters. Finally, in addition to the usual notices and updates we share, we're keen to promote good news and successes from across our society. If you or those you work with have received an award, successfully defended their Ph.D. thesis, secured funding for an exciting new initiative, please get in touch! You can see all our news items on our web pages or by following our social media accounts.



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**Andrew Feeney**, Publicity Chair

**Wei-Chang Li**, Frequency Control Editor

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## Social Media

We're very keen to build our social media presence both to promote our society and to share news items with our community. Please add our pages to your networks and promote our posts so we can continue to reach as wide an audience as possible.

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## Whitelist UFFC-S Email

Please remember to whitelist the UFFC-S Administrator email address, [uffc-admin@conferencecatalysts.com](mailto:uffc-admin@conferencecatalysts.com), to ensure that you are receiving the UFFC-S administrative email communication. For more information on how to whitelist an email address, click [here](#).

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Forward

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