

**CALL FOR PAPERS**  
**Special Issue on**  
**High Frequency Ultrasound for Biomedical Applications**  
(Submission deadline: Sep. 30, 2021)

High-frequency (>20 MHz) ultrasound has found widespread use in sub-millimeter resolution medical imaging, ultrasound backscatter microscopy (UBM), and small animal imaging. In recent years, driven by growing needs in intravascular ultrasound (IVUS) imaging, minimally invasive surgery, and particle manipulation, high-frequency ultrasound has continued to flourish as a niche modality and has expanded its important role in both imaging and therapy. Concomitant needs have thus arisen in technological R&D to innovate materials, devices, algorithms, and systems for a variety of high frequency ultrasound applications in medicine and biology.

*IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control* will organize a special issue entitled “High Frequency Ultrasound for Biomedical Applications” to highlight the latest advances in high-frequency ultrasound technology and applications. This special issue also represents a timely occasion to celebrate the pioneering work of outstanding contributors to this field. Through this special issue, IEEE-UFFC Transactions seeks to create a central resource point of peer-reviewed literature describing important advances in 1) high-frequency ultrasound technologies (including associated materials, fabrication processes, devices, algorithms, front-end electronics, and systems), and 2) new, emerging clinical applications of high-frequency ultrasound in imaging and therapy. Review articles and original contributions are sought in a wide range of related topics including, but not limited to, the following:

- 1) High-frequency imaging applications, including medical imaging, small animal imaging, IVUS, and UBM;
- 2) High-frequency therapeutic applications, including particle and cell manipulation;
- 3) High-frequency ultrasound transducers, including materials, fabrication, and characterization;
- 4) New systems and hardware for high-frequency ultrasound;
- 5) Front-end beamforming, image reconstruction, and functional imaging techniques for high-frequency ultrasound;
- 6) Signal and image processing algorithms for high-frequency ultrasound, including machine learning methods.

All contributions should be submitted online via <https://tuffc-ieee.manuscriptcentral.com>, the Manuscript Central system of *IEEE Transactions on UFFC*. When submitting, authors should select the Manuscript Type as “Special Issue Papers”. In the “Comments to Editor-in-Chief” section, authors should state that the submission is intended for the Special Issue on “High Frequency Ultrasound for Biomedical Applications”, and they should clearly highlight how their manuscript is topically aligned with at least one of the six topics stated above. Instructions for preparation and submission of manuscripts may be found at <https://www.ieee-uffc.org/tr/contrib.pdf>.

All manuscripts will be subjected to peer review. The submission deadline is Sep. 30, 2021. Accepted special issue manuscripts will be published in the *IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control* in the first quarter of 2022. The guest editors for this special issue are:

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Prospective authors are encouraged to contact the Editorial Office of the *IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control* to propose specific submission topics for this special issue. Inquires can be made to any one of the guest editors.