

SPOTLIGHT ISSUE: CALL FOR PAPERS

Micro/Nanoelectromechanical Systems (MEMS/NEMS) in UFFC

Submission Deadline: January 31, 2023

Innovations in micro/nanoelectromechanical systems (MEMS/NEMS) are key enablers for smart products and the Internet of Things (IoT), and play important roles in sensing, communication, biomedicine, public health, energy, quantum information science and technology, scientific instrumentation, and other emerging applications. At the multidisciplinary frontiers of *Ultrasonics, Ferroelectrics, and Frequency Control (UFFC)*, MEMS/NEMS have also played increasingly important roles in miniaturization, adoption of novel materials and devices, metrology, integration, packaging, and emerging applications. To help capture the ongoing cutting-edge research activities, and to cultivate the next wave of innovations in MEMS/NEMS and their applications in UFFC fields, *IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control* will organize a spotlight issue on the theme of “*MEMS/NEMS in UFFC*”. This spotlight issue will seek to compile a collection of original research and tutorial papers to promote the publication and dissemination of best practices for a broad range of engineering know-how that are essential to MEMS/NEMS and their applications in UFFC. Each article will emphasize on at least one of the following:

- 1) Pedagogically describing the technical details of a new MEMS/NEMS technology, method, material, tool, or protocol that can significantly benefit the international UFFC-S communities;
- 2) Annotating the operations and best practices of currently established simulation and experimental techniques that are used either for performance validation or real-world applications of new MEMS/NEMS;
- 3) Providing stepwise walkthroughs of well-tested laboratory procedures and fabrication protocols that are foundational to the realization of new MEMS/NEMS development and applications.

One central objective of this special issue is to kick-start the establishment of a library of peer-reviewed literature on essential research methods in MEMS/NEMS for UFFC. It is also expected to serve well as up-to-date educational resources for graduate students and researchers.

All contributions should be submitted online via <https://mc.manuscriptcentral.com/tuffc-ieee>, the Manuscript Central system of *IEEE Transactions on UFFC*. When submitting, authors should select the Manuscript Type as “Spotlight”. It is important for the authors to distinguish their manuscript from a regular submission. In the “Cover Letter” section, authors should state that the submission is intended for the Spotlight Issue on MEMS/NEMS in UFFC, and they should clearly highlight how their manuscript is topically aligned with at least one of the three sub-themes described above. Guidelines for improving quality and clarity of manuscripts may be found at <https://ieee-uffc.org/publication/t-uffc/manuscript-guidelines>.

All manuscripts will be subjected to peer review. Emphasis of reviews will be placed on the manuscript’s pedagogical value in addition to the topic’s scientific importance. The submission deadline is January 31, 2023 with an expected publication date in the third quarter of 2023.

Potential contributing authors are encouraged to contact the guest editors to propose specific submission topics that are aligned with the scope of this special issue. The guest editors will be:

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