Topical Issue of Acta Acustica


Editors of the Topical Issue:

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Provisional timeline:

- Article submission deadline: 1 March 2024 - 1 April 2024
- First Round of Review: June 2024
- First papers published: September 2024

Scope: A topical issue titled “Musical Acoustics: Latest Advances in Analytical, Numerical and Experimental Methods Tackling Complex Phenomena in Musical Instruments” will be published in Acta Acustica, the Journal of the European Acoustics Association, in 2024. Authors are invited to submit a full-length Scientific or Review Article.

This topical issue aims to compile a set of papers tackling the current challenges in musical acoustics. The editors strongly encourage submissions that delve into the latest advancements in the field, emphasising complex phenomena. Authors are welcome to submit contributions that explore one or more of the following topics:

- Machine learning and deep learning applications in musical acoustics
- Finite element-aided design of musical instruments from sustainable sources and metamaterials
- Bifurcation diagrams and continuation techniques applied to brass instruments
- Inverse parameter estimation methods
- Collection and use of datasets for timbral feature extraction and modeling
- Neural modeling of percussion instruments
- Advanced time domain simulation techniques applied to nonlinear wave propagation in stringed and percussion instruments
- Three-dimensional, nonlinear and lossy wave propagation in pipes and waveguides
- Advanced experimental methods, including robotics, motion capture, and automation
- Experimental and numerical techniques informing instrument building and luthiery
- Haptics measurement and simulation in keyboard instruments
- Experimental, analytical and simulation methods for the preservation, conservation and understanding of historical musical instruments

For the submission, visit the Acta Acustica website: https://acta-acustica.edpsciences.org/. The article processing charge for Acta Acustica is 900 €, but as a corresponding author, you may be eligible for financial support. Details can be found here. In particular, the European Acoustical Association can support you with 450 €, and you will be charged 450 €. You can ask your national acoustical association to pay the other half of the amount.

Guidelines for submitting an extended conference paper to Acta Acustica:

- The submission needs to be **significantly extended from the original conference paper, with additional material included and an extended literature review**, reaching typically 8-12 pages long (final typeset length);
- The extended conference paper needs to be a **strong research article with a broader scope and interest than the conference presentation**;
- The authors should **indicate that their contribution is an improvement or extension of their previously published conference paper**. The conference paper should be **cited in the reference list** and throughout the research article;
- **The standard peer review process of the journal applies.**
- Please submit your articles to the Special Issue via the submission system of Acta Acustica at https://www.editorialmanager.com/aacus/ before the 1st of April 2024.