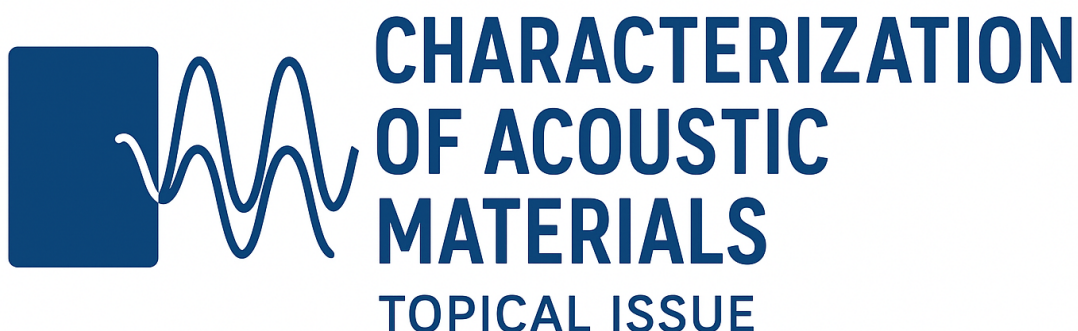


Call for papers

Special Issue on the topic of

Characterization of Acoustic Materials

in Acta Acustica
(journal of the European Acoustics Association)



Guest Editors

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Background

The accurate characterization of acoustic materials remains a central focus in acoustic research, with applications spanning architectural design, environmental noise control, automotive engineering, aerospace, and audio technologies. As demands for effective sound control continue to rise, the precise understanding and quantification of the acoustic performance of materials have become increasingly critical.

Traditional laboratory methods, such as impedance tube measurements and reverberation chamber techniques, continue to provide standardized benchmarks for evaluating sound absorption coefficients, transmission loss, and related parameters. However, these approaches often encounter limitations when applied to heterogeneous or anisotropic media, or when extrapolating laboratory results to in situ conditions. Recent investigations are addressing these challenges, enabling characterization of frequency- and angle-dependent properties, anisotropic effects, and the influence of the acoustic environment surrounding the material.

Concurrently, the emergence of engineered solutions such as acoustic metamaterials, bio-based composites, and smart materials has introduced new challenges for measurement and modelling. These materials frequently exhibit behaviours that exceed the predictive capacity of conventional approaches, necessitating the development of refined and adaptable characterization strategies.

Scope of the Special Issue

This topical issue brings together current progress and emerging trends in the characterization of acoustic materials. Contributions cover both theoretical and experimental methodologies and explore the potential of innovative materials for next-generation acoustic applications. The issue aims to foster a deeper understanding of how materials interact with sound while providing a platform for critical discussion across diverse research communities (room acoustics, material science, etc.).

Topics of interest include, but are not limited to:

- Impedance tube measurements
- Acoustical holography techniques
- Ultrasonic measurements
- Surface acoustic wave measurements
- Quasi-static measurements

The approaches and means of analysis are not restricted to these methods, encouraging a broad spectrum of experimental and computational techniques.

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Submissions

All kinds of relevant papers will be considered and reviewed by a distinguished team of international experts: full length original research articles, reviews, letters, and technical briefs that address relevant topics within the scope of the special issue.

The deadline for submission is **30 June 2026**.

The manuscripts will be handled on a rolling basis. The submissions can be in Latex or MS Word. Abstract submission is optional and will allow you to receive early feedback from the Guest Editors on whether your article is in the scope of the special issue. Please email you abstract directly to the Guest Editors at the email addresses above.

Manuscript can be submitted online via the submission and peer-review site of Acta Acustica. Register choosing the title of the special issue "Characterization of Acoustic Materials". Please find further instructions for authors at <https://acta-acustica.edpsciences.org/author-information/instructions-for-authors>.

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