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Editorial: Breaking the silence - the launch of npj Acoustics

Check for updates

Sound “is one of the subtlest pieces of nature” wrote Francis Bacon in his *Sylva Sylvarum* in 1627¹. More than two centuries later Hermann von Helmholtz stated in his *On the Sensations of Tone* book “...acoustics constantly employs conceptions and names borrowed from the theory of harmony ...”². These points made over 160 years ago remain ever important today. In 1978 Frederick Hunt summed up “The sounds of music and speech are deeply rooted in man’s evolutionary past” in his historical review *Origins in Acoustics*³.

The auditory system in living creatures is the only sense that remains active even during sleep and largely controls the perception of the surrounding world and general well-being. Harnessing, controlling and processing sound and vibration are becoming ever more essential to modern society. Today’s acoustics encompasses diverse and far-ranging applications, e.g. suppressing unwanted noise and vibration in the built environment and transport systems, reproducing music and positive soundscapes, using audible sound waves and ultrasonics in non-destructive testing and imaging in fluids, gases and elastic solids, medical imaging and therapeutics, emerging applications such as speech and voice recognition and ultrahaptics technology, to name but a few. Recognizing the significance of acoustics as a vital research discipline, the Nature Portfolio Journal (npj) series launched npj Acoustics in April 2024, a new journal dedicated to advancing this field.

Aims and scope

npj Acoustics is a fully open access journal that publishes the results of rigorous and novel research relating to the discipline of acoustics. The journal aims to publish high quality papers that report bold new ideas and significant advances in the field. Important areas of interest are the generation, propagation, sensing, manipulation and perception of sound and the analysis of related acoustic phenomena. The journal covers a broad range of topics including but not limited to:

- Acoustic materials such as metamaterials, porous media, and smart structures for sound manipulation

- Transducers for sound generation and sensing
- Acoustic signal processing
- Hearing, audiology, and medical acoustics
- Psychoacoustics, perception of sounds by biological species, and noise effects
- Musical acoustics, immersive audio, and soundscapes
- Theoretical understanding of the basic science of acoustics (infrasound, audible sound waves, and ultrasonics)
- Computational methods for predicting acoustic wave phenomena
- Medical ultrasound for diagnosis and treatment of diseases

The journal offers more choice to Nature Portfolio authors who are seeking a fully open-access and more inclusive platform for publishing their work. The journal is led by experts who collaborate to cultivate high-quality research related to acoustics. As part of the npj Series, this journal focuses on fostering global partnerships with the research community and other Springer Nature journals.

Types of publications

npj Acoustics publishes a diverse array of high-quality content, including:

- Articles: original research that makes significant contributions to the field.
- Reviews: comprehensive overviews of current research trends and challenges.
- Perspectives and Comments: insights and expert opinions on emerging topics.
- Editorials and Correspondence: short discussions and viewpoints on recent advances.
- Technical Reports and Protocols: detailed methodologies and technical developments.

Our vision

Our vision is for npj Acoustics to become the premier, high-impact platform for publishing groundbreaking research that addresses fundamental questions and solves real-world challenges in acoustics. We aim to inspire innovation across disciplines by showcasing state-of-the-art studies, fostering collaborations, and highlighting transformative technologies in acoustics and related areas it underpins. By offering a platform for diverse perspectives and interdisciplinary

research, npj Acoustics seeks to advance the boundaries of knowledge and application in the field.

Commitment to diversity

Key criteria for publication in the journal are scientific rigour, originality and significance. We also believe that diversity in research is crucial for driving innovation and advancing the field of acoustics. npj Acoustics is committed to fostering an inclusive environment that encourages contributions from a wide range of disciplines, perspectives, and methodologies. We encourage contributions from individuals from all backgrounds, geographic locations around the world and stages in their research or professional career. We are committed to ensure a balanced representation of associated editors, authors, reviewers and editorial board members in terms of race, gender, age, geographical location and research expertise. We will consider offering waivers to authors from research groups that are under-represented in terms of academic publishing. We aim to bridge the gap between different scientific communities caused by cultural differences, resource disparities and historical inequities.

Invitation to contribute

We invite researchers, practitioners and innovators working in academia and non-academia to contribute to npj Acoustics in the form of traditional research papers, reviews or perspectives. We encourage active engagement with the journal through [joining our Editorial Board](#), proposing hot topics for new collections (special issues) and supporting our peer-review process. The journal already runs two special collections on [Harnessing Topology in Acoustics](#) and [AI and Machine Learning in Acoustic Signal Processing](#). In 2025, additional special collections are planned, covering topics including Innovations in Medical Acoustics and Ultrasound Technologies, Acoustic Metamaterials, Psychoacoustics and Sound Perception, and Immersive Audio and Soundscape Design.

Future outlook

Looking ahead, npj Acoustics has ambitious plans for growth. We will expand our editorial board to include more experts from around the

world, ensuring that our journal reflects the global nature of the field and emerging topics in acoustics. We also plan to collaborate with other Nature Portfolio journals to create cross-journal collections that explore the intersections between acoustics and other scientific disciplines. Our long-term vision is to establish npj Acoustics as a leading, high-impact journal in the field that is open to novel agenda-setting ideas challenging existing paradigms as well as additional rigorously proved evidence contributing to more established areas of acoustics. We are also open to publications describing the impact of acoustics related research on the economy, society and environment. We aim to be a driving force in the development of new knowledge, fostering innovation, and addressing the most pressing challenges in sound generation, propagation, sensing, manipulation and perception.

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Competing interests

The authors declare no competing interests.

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