

Acoustic and mechanical vibrations

Session organizer

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Description

The Session on Acoustics and Mechanical Vibrations is committed to discuss the state of the art on the study of sound and mechanical waves propagating in gases, liquids, and solids. Both experimental and theoretical works are suitable for this session reporting on important findings, novel insights, or useful practices in the Acoustics and Mechanical Vibrations areas. The following topics are the principal session scopes:

- Aeroacoustics is the study of aerodynamic sound, generated when a fluid flow interacts with a solid surface or with another flow. Examples of aeroacoustics are the study of sound made by jets and the physics of shock waves (sonic booms).
- Architectural acoustics is the study of how sound and buildings interact including the behavior of sound in concert halls and auditoriums but also in office buildings, factories and homes.
- Bioacoustics is the study of the use of sound by animals such as whales, dolphins and bats. Psychological Acoustics is the study of the mechanical, electrical and biochemical function and reaction to hearing in living organisms.
- Vibration is amenable for the contribution on the late developments in the field of moving structures, rotating structures, thermal effect, and fluid loading.
- Structural Acoustics and Vibration is the study of how sound and mechanical structures interact; for example, the transmission of sound through walls and the radiation of sound from vehicle panels.
- Underwater acoustics is the study of the propagation of sound in the oceans and closely associated with sonar research and development.
- Acoustic engineering is the study of how sound is generated and measured by loudspeakers, microphones, sonar projectors, hydrophones, ultrasonic transducers, sensors.