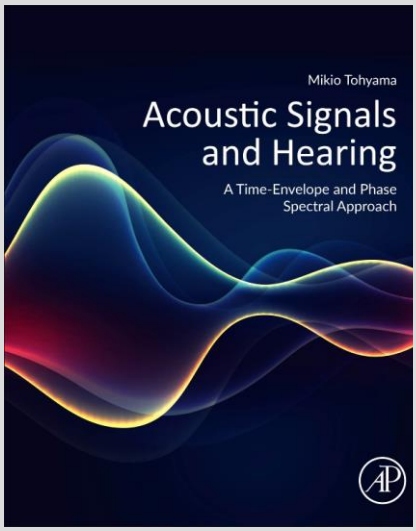

Acoustic Signals and Hearing

A Time-Envelope and Phase Spectral Approach

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Gain a modern understanding of the principles of acoustics from the perspective of hearing

KEY FEATURES

- Presents unique sounds and sound fields from the perspective of hearing
- Covers source-signature and sound-path analysis
- Gives a reconstruction of the basics of acoustics and audio engineering via timeless topics such as linear system theory in the time and frequency domains
- Uses the new envelope and phase analysis approach to signal and waveform analysis
- Provides new perspectives via phase properties on ways to solve acoustical problems
- Presents straightforward mathematical formulations that give familiarity to discrete expressions of sound waves
- Gives a seamless and intuitive understanding — from mathematical expressions to a subjective impression of sound

DESCRIPTION

Understanding acoustics – the science of sound -- is essential for audio and communications engineers working in media technology. It is also extremely important for engineers to understand what allows a sound to be heard in the way it is, what makes speech intelligible, and how a particular sound is recognized within a multitude of sounds. *Acoustic Signals and Hearing: A Time-Envelope and Phase Spectral Approach* is unique in presenting the principles of sound and sound fields from the perspective of hearing, particularly through the use of speech and musical sounds.

Acoustic Signals and Hearing: A Time-Envelope and Phase Spectral Approach is an ideal resource for researchers and acoustic engineers working in today's environment of media technology, and graduate students studying acoustics, audio engineering, and signal processing.

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