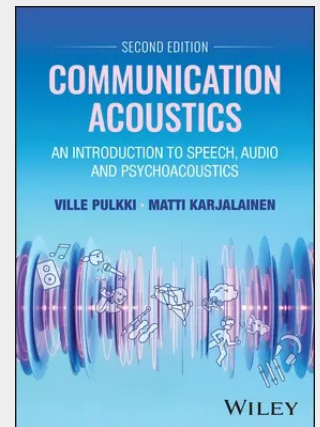


Communication Acoustics

An Introduction to Speech, Audio and Psychoacoustics

Master communication acoustics with AI, spatial audio, and VR The newly revised second edition of Communication Acoustics provides graduate students and professionals with comprehensive foundations in auditory perception, signal processing, and modern computational methods. The authors integrate traditional psychoacoustic principles with cutting-edge developments in machine learning, sound and music computing, spatial audio, and immersive virtual reality audio systems. This updated edition includes a broad and comprehensive introduction to machine learning techniques used in different branches of audio, speech, and technical audiology. Coverage includes recent advances in spatial audio rendering, VR audio systems, computational auditory modeling, sound quality measurement, electroacoustic transducers, and hearing aid processing. Python programming examples with comprehensive teaching materials support hands-on learning and practical application. Readers will find: - Machine learning using neural architectures and methods directly applicable in audio and speech technologies - Spatial audio for virtual reality including 6DOF rendering, head tracking, and advanced HRIR individualization techniques - Comprehensive view to sound and music computing, from audio coding to sound synthesis, audio effects, and reverberation - Updated content on loudspeakers and microphones, source directivity, musical instrument physics, and physical modeling of musical instruments - Psychoacoustics including new imagery of the cochlea, perceptual cues, listening tests and psychoacoustic quantities - Python programming examples with supplementary teaching slides and project instructions to support hands-on learning and course implementation Communication Acoustics is an ideal resource for graduate students in electrical engineering, PhD researchers in acoustics, and industrial R&D professionals. By integrating psychoacoustic principles with advances in AI, spatial audio, and VR technologies, the book prepares readers for next-generation solutions.



123,50 €

123,50 € (zzgl. MwSt.)

vorbestellbar, Erscheinungstermin ca. Januar 2027

Artikelnummer: 9781394367276

Medium: Buch

ISBN: 978-1-394-36727-6

Verlag: John Wiley & Sons Inc

Erscheinungstermin: 14.01.2027

Sprache(n): Englisch

Auflage: 2. Auflage 2027

Produktform: Gebunden

Seiten: 512

