1. Record Nr. UNINA990000449930403321

Autore	Nakamura, Yoshihiko
Titolo	Advanced robotics : redundancy and optimization / Yoshihiko Nakamura
Pubbl/distr/stampa	Reading, Mass. : Addison-Wesley, 1991
ISBN	0-201-15198-7
Descrizione fisica	XI,337 p. ; 24 cm
Disciplina	629.892
Locazione	DINEL
Collocazione	10 D III 479
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia

2. Record Nr. UNINA9910526374803321

Autore	Pulkki Ville
Titolo	Communication acoustics : an introduction to speech, audio and psychoacoustics / / Ville Pulkki and Matti Karjalainen
Pubbl/distr/stampa	Chichester, England : , : Wiley, , 2015 2015
ISBN	1-119-82544-X 1-118-86655-X 1-118-86658-4
Descrizione fisica	1 online resource (457 p.)
Collana	New York Academy of Sciences
Classificazione	547 620.2
Disciplina	620.2
Soggetti	Sound - Recording and reproducing Hearing Psychoacoustics Sound
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa

Livello bibliografico	Monografia
Note generali	Includes bibliographical references and index
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	""Communication Acoustics: An Introduction to Speech, Audio, and Psychoacoustics""; ""Copyright""; ""Contents""; ""About the Authors""; ""Preface""; ""Preface to the Unfinished Manuscript of the Book""; ""Introduction""; ""Chapter 1 How to Study and Develop Communication Acoustics""; ""1.1 Domains of Knowledge""; ""1.2 Methodology of Research and Development""; ""1.3 Systems Approach to Modelling""; ""1.4 About the Rest of this Book""; ""1.5 Focus of the Book""; ""1.6 Intended Audience""; ""References""; ""Chapter 2 Physics of Sound""; ""2.1 Vibration and Wave Behaviour of Sound"" ""2.1.1 From Vibration to Waves""""2.1.2 A Simple Vibrating System""; ""2.1.3 Resonance""; ""2.1.4 Complex Mass Spring Systems""; ""2.1.5 Modal Behaviour""; ""2.1.6 Waves""; ""2.2 Acoustic Measures and Quantities""; ""2.2.1 Sound and Voice as Signals""; ""2.2.2 Sound Pressure""; ""2.2.3 Sound Pressure Level""; ""2.2.4 Sound Power""; ""2.2.5 Sound Intensity""; ""2.2.6 Computation with Amplitude and Level Quantities""; ""2.3 Wave Phenomena""; ""2.3.1 Spherical Waves""; ""2.3.2 Plane Waves and the Wave Field in a Tube""; ""2.3.3 Wave Propagation in Solid Materials"" ""2.3.4 Reflection, Absorption, and Refraction""""2.3.5 Scattering and Diffraction""; ""2.3.6 Doppler Effect""; ""2.4 Sound in Closed Spaces: Acoustics of Rooms and Halls""; ""2.4.1 Sound Field in a Room""; ""2.4.2 Reverberation""; ""2.4.3 Sound Pressure Level in a Room""; ""2.4.4 Modal Behaviour of Sound in a Room""; ""2.4.5 Computational Modelling of Closed Space Acoustics""; ""Summary""; ""Further Reading""; ""References""; ""Chapter 3 Signal Processing and Signals""; ""3.1 Signals""; ""3.1.1 Sounds as Signals""; ""3.1.2 Typical Signals""; ""3.2 Fundamental Concepts of Signal Processing"" ""3.2.1 Linear and Time-Invariant Systems""""3.2.2 Convolution""; ""3.2.3 Signal Transforms""; ""3.2.4 Fourier Analysis and Synthesis""; ""3.2.5 Spectrum Analysis""; ""3.2.6 Timea€?Frequency Representations""; ""3.2.7 Filter Banks""; ""3.2.8 Auto- and Cross-Correlation""; ""3.2.9 Cepstrum""; ""3.3 Digital Signal Processing (DSP)""; ""3.3.1 Sampling and Signal Conversion""; ""3.3.2 Z Transform""; ""3.3.3 Filters as LTI Systems""; ""3.3.4 Digital Filtering""; ""3.3.5 Linear Prediction""; ""3.3.6 Adaptive Filtering""; ""3.4 Hidden Markov Models"" ""3.5 Concepts of Intelligent and Learning Systems""""Summary""; ""Further Reading""; ""References""; ""Chapter 4 Electroacoustics and Responses of Audio Systems""; ""4.1 Electroacoustics""; ""4.1.1 Loudspeakers""; ""4.1.2 Microphones""; ""4.2 Audio System Responses""; ""4.2.1 Measurement of System Response""; ""4.2.2 Ideal Reproduction of Sound""; ""4.2.3 Impulse Response and Magnitude Response""; ""4.2.4 Phase Response""; ""4.2.5 Non-Linear Distortion""; ""4.2.6 Signal-to-Noise Ratio""; ""4.3 Response Equalization""; ""Summary""; ""Further Reading""; ""References"" ""Chapter 5 Human Voice""
Sommario/riassunto	In communication acoustics, the communication channel consists of a sound source, a channel (acoustic and/or electric) and finally the receiver: the human auditory system, a complex and intricate system that shapes the way sound is heard. Thus, when developing techniques in communication acoustics, such as in speech, audio and aided hearing, it is important to understand the time-frequency-space resolution of hearing. This book facilitates the reader's understanding and development of speech and audio techniques based on our

knowledge of the auditory perceptual mechanisms by introducing the