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	Nota di contenuto	Introduction -- Signal Processing Model of Human Auditory System -- Noise Measurement Method Based on the Model -- Temporal Primary Sensations of Noise -- Spatial Primary Sensations of Noise -- Noise Measurements -- Annoyance of Noise -- Short-Term Effects of Noise

Sommario/riassunto	This book deals with methods of measurement and evaluation of environmental noise based on an auditory neural and brain-oriented model. The model consists of the autocorrelation function (ACF) and the interaural cross-correlation function (IACF) mechanisms for signals arriving at the two ear entrances. Even when the sound pressure level of a noise is only about 35 dBA, people may feel annoyed due to the aspects of sound quality. These aspects can be formulated by the factors extracted from the ACF and IACF. Several examples of measuring environmental noise—from outdoor noise such as that of aircraft, traffic, and trains, and indoor noise such as caused by floor impact, toilets, and air-conditioning—are demonstrated. According to the noise measurement and evaluation, applications for sound design are discussed. This book provides an excellent resource for students, researchers, and practitioners in a wide range of fields, such as the automotive, railway, and electronics industries, and soundscape, architecture, and acoustics.