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Nota di contenuto	Introduction: Periodic pulse train and resonance -- Mirror image theory and one-dimensional systems -- Wave equation for spherical waves in coherent sound fields -- Coherent field in rooms: zeros by multiple reflection -- Random sound fields in rooms -- Poles and zeros of power response and driving point impedance of a source in Source signature analysis by modulation envelopes -- Zeros and room transfer functions for incoherent field.-Statistical phase analysis in rooms.
Sommario/riassunto	This book deals with the phase properties in the context such as sound fields in rooms from a perspective of transfer functions for sound paths. Phase analysis, i.e., investigations of zeros of transfer functions, is a qualitative or system theoretic approach to sound fields rather than the wave-theoretic power spectral analysis. The examination of phase responses offers new insights into sound fields and yields results that the standard power spectral analysis cannot provide. This book presents experimental data and numerical examples based on the mathematical formulations. It shows the mathematical formulations of acoustics and communication systems for engineers and physicists to get familiar with the basics of science. Chapters 1–5 provide the

theoretical basis on the system theoretic approach to sound fields where Chapters 1 and 2 are introductions to discrete acoustic systems, Chapters 3–5 summarize wave equations, geometrical and random theories of room acoustics, and Chapters 6–10 develop details of transfer functions in sound.