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Titolo	Computational Simulation in Architectural and Environmental Acoustics [[electronic resource]] : Methods and Applications of Wave-Based Computation / / edited by Tetsuya Sakuma, Shinichi Sakamoto, Toru Otsuru
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ISBN	4-431-54454-2
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (332 p.)
Disciplina	729.29
Soggetti	Acoustical engineering Applied mathematics Engineering mathematics Interior architecture Interiors Acoustics Noise control Engineering Acoustics Mathematical and Computational Engineering Interior Architecture and Design Applications of Mathematics Noise Control
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Introduction.- Finite-Difference Time-Domain Method -- Finite Element Method -- Boundary Element Method -- Alternative Time-Domain Methods -- Room Acoustics Simulation -- Noise Propagation Simulation -- Acoustic Property Simulation for Building Components -- Auralization.
Sommario/riassunto	This book reviews a variety of methods for wave-based acoustic simulation and recent applications to architectural and environmental acoustic problems. Following an introduction providing an overview of

computational simulation of sound environment, the book is in two parts: four chapters on methods and four chapters on applications. The first part explains the fundamentals and advanced techniques for three popular methods, namely, the finite-difference time-domain method, the finite element method, and the boundary element method, as well as alternative time-domain methods. The second part demonstrates various applications to room acoustics simulation, noise propagation simulation, acoustic property simulation for building components, and auralization. This book is a valuable reference that covers the state of the art in computational simulation for architectural and environmental acoustics. .