

Computational Simulation in Architectural and Environmental Acoustics

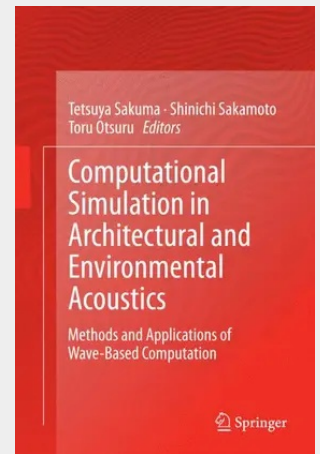
Methods and Applications of Wave-Based Computation

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.

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