

Computational Atmospheric Acoustics

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The main text of the book focuses on physical effects in atmospheric acoustics. The effects are illustrated by many numerical examples. The main text requires a very limited mathematical background from the reader; detailed mathematical descriptions of the models, developed from the basic principles of acoustics, are presented in appendices. Models for moving media are compared with models that are based on the effective sound speed approach. Both two-dimensional models and three-dimensional models are presented. As meteorological effects play an important role in atmospheric acoustics, selected topics from boundary layer meteorology and the theory of turbulence are also presented.

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