

Wavelets and their applications: case studies

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20449165&lokasi=lokal>

Abstrak

This collection of independent case studies demonstrates how wavelet techniques have been used to solve open problems and develop insight into the nature of the systems under study. Each case begins with a description of the problem and points to the specific properties of wavelets and techniques used for determining a solution.

The cases range from a very simple wavelet-based technique for reducing noise in laboratory data to complex work on two-dimensional geographical data display conducted at the Earthquake Research Institute in Japan. One case study shows how wavelet analysis is used in the development of a Japanese text-to-speech system for personal computers and another presents new wavelet techniques developed for and applied to the study of atmospheric wind, turbulent fluid, and seismic acceleration data.

Although calculus and some junior and senior mathematics courses for scientists and engineers will suffice, a solid background in undergraduate mathematics, particularly analysis and numerical analysis, and some familiarity with the basics of wavelets are helpful for reading this book.