Computational Granular Mechanics and its Engineering Applications: A Comprehensive Guide

Authors: Dr. Lidija Zdravkovic, Prof. Dr.-Ing. Stefan Luding

Computational Granular Mechanics and Its Engineering Applications (Springer Tracts in Mechanical Engineering)

⭐⭐⭐⭐⭐ 5 out of 5

Language	: English
File size	: 127579 KB
Text-to-Speech	: Enabled
Screen Reader	: Supported
Enhanced typesetting	: Enabled
Print length	: 683 pages

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Computational granular mechanics is a rapidly growing field that has gained significant importance in recent years. Granular materials, such as sand, gravel, and powders, are ubiquitous in nature and industry, and they exhibit complex behaviors that can be difficult to understand and predict using traditional continuum mechanics approaches.

Computational granular mechanics provides a powerful tool for studying the behavior of granular materials at the microscopic level. By using numerical simulations, engineers and researchers can investigate the interactions between individual particles and the macroscopic properties of the material as a whole.

This book provides a comprehensive to computational granular mechanics. It covers the fundamental principles of granular mechanics, as well as the most commonly used numerical methods for simulating granular materials. The book also includes a number of case studies that demonstrate the application of computational granular mechanics to real-world engineering problems.

Key Features

- Provides a comprehensive overview of computational granular mechanics

- Covers the fundamental principles of granular mechanics

- Describes the most commonly used numerical methods for simulating granular materials

- Includes a number of case studies that demonstrate the application of computational granular mechanics to real-world engineering problems

Audience

This book is intended for engineers and researchers who are interested in learning about computational granular mechanics. The book is also suitable for use as a textbook for graduate courses on computational granular mechanics.

Table of Contents

1. to Computational Granular Mechanics

2. Fundamental Principles of Granular Mechanics

3. Numerical Methods for Simulating Granular Materials

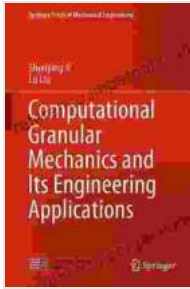4. Case Studies

About the Authors

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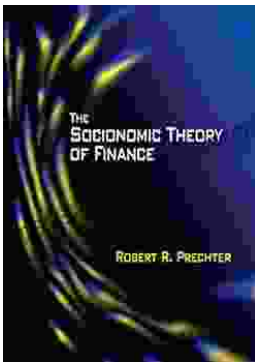
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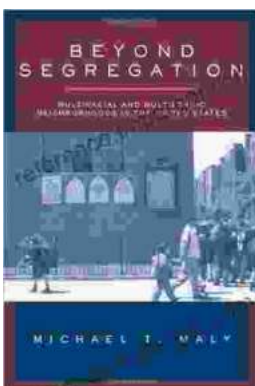
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