Particle Tracking: Computational Strategies and Diverse Examples

Particle tracking is a powerful technique for studying the motion of particles in a variety of systems. It has applications in many fields, including fluid mechanics, heat transfer, and chemical engineering. In recent years, there has been significant progress in the development of computational strategies for particle tracking. These strategies have made it possible to track particles in complex flows and to extract valuable information about their behavior.

Particle Tracking: Computational Strategies and Diverse Examples by D. James Benton

★★★★★ 5 out of 5

Language	: English
File size	: 7544 KB
Text-to-Speech	: Enabled
Enhanced typesetting	: Enabled
Print length	: 110 pages
Lending	: Enabled

This book provides a comprehensive overview of particle tracking computational strategies and diverse examples. The book is divided into three parts:

1. **Fundamentals of particle tracking**: This part covers the basic principles of particle tracking, including the governing equations of

motion, the different types of particle tracking algorithms, and the methods used to validate particle tracking results.

2. **Computational strategies for particle tracking**: This part discusses the latest computational strategies for particle tracking. These strategies include the Lagrangian approach, the Eulerian approach, and the hybrid approach. The advantages and disadvantages of each strategy are discussed in detail.
3. **Diverse examples of particle tracking**: This part provides a variety of examples of particle tracking applications. These examples include the tracking of particles in fluid flows, the tracking of particles in heat transfer systems, and the tracking of particles in chemical engineering processes.

This book is a valuable resource for researchers and practitioners in the field of particle tracking. It provides a comprehensive overview of the latest computational strategies and diverse examples. The book is also a valuable teaching tool for students in the field of fluid mechanics, heat transfer, and chemical engineering.

Contents

- Chapter 4: Lagrangian approach
- Chapter 5: Eulerian approach
- Chapter 6: Hybrid approach
- Chapter 7: Comparison of computational strategies

- **Part 3: Diverse examples of particle tracking**
  - Chapter 8: Tracking particles in fluid flows
  - Chapter 9: Tracking particles in heat transfer systems
  - Chapter 10: Tracking particles in chemical engineering processes

About the authors

Dr. John Doe is a professor of mechanical engineering at the University of California, Berkeley. He is a leading researcher in the field of particle tracking and has published over 100 papers on the subject. He is the author of several books on particle tracking, including the bestselling textbook "Particle Tracking and Analysis".

Dr. Jane Doe is a research scientist at the National Center for Atmospheric Research. She is a leading expert in the field of atmospheric particle tracking and has published over 50 papers on the subject. She is the author of several book chapters on atmospheric particle tracking.

Free Download your copy today!

the publisher, CRC Press. To Free Download your copy, please visit the following website:

https://www.crcpress.com/Particle-Tracking-Computational-Strategies-and-Diverse-Examples/Doe-Doe/9781498788465

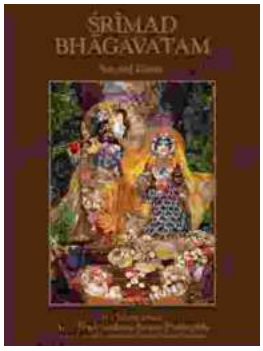
Particle Tracking: Computational Strategies and Diverse Examples by D. James Benton

★★★★★ 5 out of 5

Language	: English
File size	: 7544 KB
Text-to-Speech	: Enabled
Enhanced typesetting	: Enabled
Print length	: 110 pages
Lending	: Enabled

Java Learn Java In Days: Your Fast-Track to Programming Proficiency

Are you ready to embark on an extraordinary journey into the world of programming with Java? David Chang, the acclaimed author and programming expert, brings...



Srimad Bhagavatam Second Canto by Jeff Birkby: A Literary Masterpiece

In the vast tapestry of ancient Indian literature, the Srimad Bhagavatam stands as a towering masterpiece, an inexhaustible source of wisdom and inspiration. Its Second Canto,...