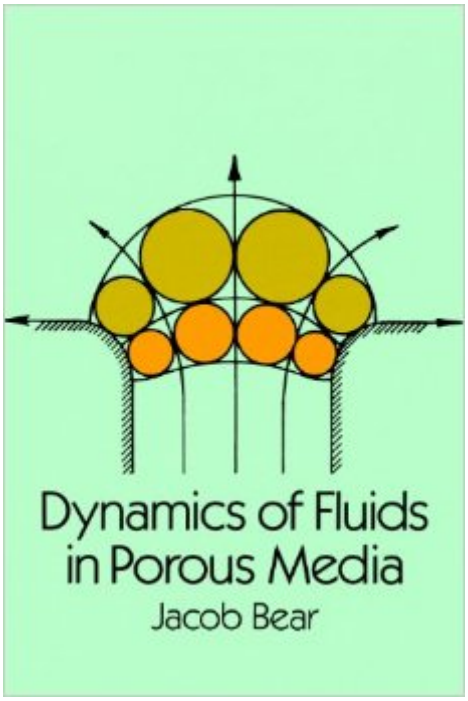
Dynamics Of Fluids In Porous Media (Dover Civil And Mechanical Engineering)



Synopsis

This classic work by one of the world's foremost hydrologists presents a topic encountered in the many fields of science and engineering where flow through porous media plays a fundamental role. It is the standard work in the field, designed primarily for advanced undergraduate and graduate students of ground water hydrology, soil mechanics, soil physics, drainage and irrigation engineering, and petroleum and chemical engineering. It is highly recommended as well for scientists and engineers already working in these fields.Throughout this generously illustrated, richly detailed study, which includes a valuable section of exercises and answers, the emphasis is on understanding the phenomena occurring in porous media and on their macroscopic description. The book's chapter titles reveal its comprehensive coverage: Introduction, Fluids and Porous Matrix Properties, Pressures and Piezometric Head, The Fundamental Fluid Transport Equations in Porous Media, The Equation of Motion of a Homogeneous Fluid, Continuity and Conservation Equations for a Homogeneous Fluid, Solving Boundary and Initial Value Problems, Unconfined Flow and the Dupuit Approximation, Flow of Immiscible Fluids, Hydrodynamic Dispersion, and Models and Analogs."Systematic and comprehensive . . . a book that satisfies the highest standards of excellence. . . . Will undoubtedly become the standard reference in this field." â ” R. Allen Freeze, IBM Thomas J. Watson Research Center, Water Resources Research.

Book Information

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Customer Reviews

You may never need any other text other than this one. This is a comprehensive text covering everything from defining and classifying aquifers to fluid transport, continuity and conservation, boundary-value problems, flow of immiscible fluids and heat and mass transport. I would recommend this to anyone who wants to know the basics and beyond.

good price and fast delivery

An exceptional resource. Well written and thorough. Even includes mathematical techniques for solving classes of PDEs relating to porous flow.

i purchased kindle version of this book. there are typos much more than i expected. and those equations in kindle are image files that cannot be zoomed.

All very well, I received the books without problems and very son too

Other reviewers already cover about how important is this book for hydrogeologist. Although this book is more theoretical, but it is also important for water practitioner. This contains theories behind the groundwater model that many practitioners use.If you get this book, why stop there. Get the other book by Bear "Hydraulics of Groundwater".

Good Reference book

the Plumbing and Mechanical Codes (Code Check Plumbing & Mechanical: An Illustrated Guide) PE Mechanical Engineering: Thermal and Fluids Practice Exam Shigley's Mechanical Engineering Design (McGraw-Hill Series in Mechanical Engineering) Mechanical Engineering Design (McGraw-Hill Mechanical Engineering) Modal Testing, Theory, Practice, and Application (Mechanical Engineering Research Studies: Engineering Dynamics Series) Modeling Groundwater Flow and Contaminant Transport (Theory and Applications of Transport in Porous Media) Fluid Flow in the Subsurface: History, Generalization and Applications of Physical Laws (Theory and Applications of Transport in Porous Media) Mechanics of Groundwater in Porous Media The Finite Element Method: Linear Static and Dynamic Finite Element Analysis (Dover Civil and Mechanical Engineering) Lyapunov Matrix Equation in System Stability and Control (Dover Civil and Mechanical Engineering) Theory of Elastic Stability (Dover Civil and Mechanical Engineering) Analytical Fracture Mechanics (Dover Civil and Mechanical Engineering) Matrix Analysis of Structural Dynamics: Applications and Earthquake Engineering (Civil and Environmental Engineering) PE Mechanical Engineering: Mechanical Systems and Materials Practice Exam Dynamics of Structures (4th Edition) (Prentice-Hall International Series in Civil Engineering and Engineering Mechanics) Dynamics of Structures (5th Edition) (Prentice-Hall International Series I Civil Engineering and Engineering Mechanics)