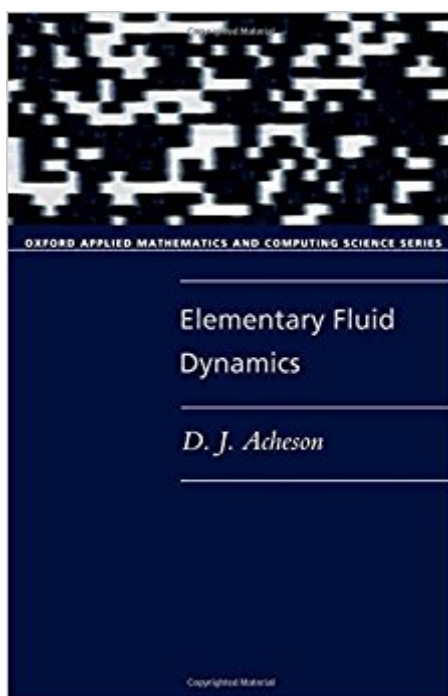The book was found

Elementary Fluid Dynamics (Oxford Applied Mathematics And Computing Science Series)

Synopsis

The study of fluid dynamics is a central theme in modern applied mathematics. It is used to model a vast range of physical phenomena and plays a vital role in science and engineering. This textbook provides a clear introduction to both the theory and application of fluid dynamics that is suitable for all undergraduates coming to the subject for the first time. Students need only a basic knowledge of vector calculus, complex analysis, and simple methods of solving differential equations. Numerous exercises (with hints and answers) illustrate the main ideas and serve to organize the reader's understanding. The wide range of topics discussed include inviscid and viscous flows, waves in fluids, boundary layer flow, and instability in flows, along with historical information and many references to important experiments. This is a comprehensive and absorbing introduction to the mathematical study of fluid behavior.

Book Information

Series: Oxford Applied Mathematics and Computing Science Series

Paperback: 408 pages

Publisher: Clarendon Press; 1 edition (August 9, 1990)

Language: English

ISBN-10: 0198596790

ISBN-13: 978-0198596790

Product Dimensions: 8.5 x 0.9 x 5.5 inches

Shipping Weight: 1.3 pounds (View shipping rates and policies)

Average Customer Review: 4.2 out of 5 stars   8 customer reviews

Best Sellers Rank: #193,922 in Books (See Top 100 in Books)   #45 inÃ Â Books > Engineering & Transportation > Engineering > Mechanical > Hydraulics   #51 inÃ Â Books > Engineering & Transportation > Engineering > Chemical > Fluid Dynamics   #139 inÃ Â Books > Science & Math > Physics > Mechanics

Customer Reviews

`Much recent research is incorporated. This makes the book interesting to read,.... the writing is clear and careful, anticipating students' difficulties.'  `I feel confident that it will be deservedly successful.' Times Higher Education Supplement`in this excellent mathematical undergraduate text, the author has managed to discuss the major topics in inviscid and viscous fluid dynamics.' MATHEMATIKA'a comprehensive and absorbing introduction to the mathematical study of fluid behaviour'Physics Briefs 1991`Throughout, the author demonstrates his awareness of the

relevance of his material, and conveys his enthusiasm for it. His book has its own particular flavour, contains a wealth of information, and is mathematically secure. It can be confidently recommended.' Journal of FluidMechanics'a very readable book and the authors attractive style makes it an enjoyable exercise'Professor N. C. Freeman (University of Newcastle), Contemporary Physics, Volume 32, Number 2, March/April 1991'The book is aimed at applied mathematicians, physicists, and engineers, but is carefully and clearly written and could cheerfully grace the shelves of any pure mathematician interested in the real world.' New Scientist`Throughout he lovingly describes experiments and presents drawings of the results.' `Acheson's voice is almost conversational. He includes many good exercises (with hints and answers in the back).' `I really find this a very attractive book and am happy to recommend it for a first graduate course in fluid mechanics.' Physics Today

D. J. Acheson is at Jesus College, Oxford.

A book of typical Cambridge, Oxford style: clear and instructive. Mathematics is kept at a relatively low level which is ideal for first time reader of fluid mechanics. A lot of interesting examples and illustrations get the theory in contact with real life, which make the book easier to follow and quite enjoyable to read. As its name suggest, the contents of this book are elementary. Therefore, if you need to a basic understanding of fluid dynamics, this book is a great choice.

Elementary fluid dynamics (Acheson) es un libro muy bueno para estudiantes de fÃƒÂsica como yo. Explica bastante bien y contiene todos los conceptos bÃƒÂ¡sicos que se debiesen manejar un fÃƒÂsico o un ingeniero. TambiÃƒÂ©n contiene problemas resueltos, lo cual es muy ÃƒÂºtil.

First of all, there is nothing elementary about fluid dynamics. This book was recommended in a course I took as a first year Chemistry PhD student. If I didn't have a professor there to ask questions to, I would have never understood this subject just from this book. It is a good reference to this subject, but definitely has no sections that read like a cover-to-cover introductory textbook. Everything I needed to know and more is in there, I just have to read sections over and over to understand it!

I received the book timely. Book was clean and the price was fair. Helped me get a B in a 500 level class whose four prior prerequisites I was not able to take but were necessary.

This is the clearest book on fluid dynamics that I've seen. It's perfect for physics students who need a quick review of the subject. It does an amazing job of relating the math to the reality. Many of the problems make reference to research as recent as the 1980's. This book isn't the last word on anything (for example the information on instability is only the beginning), but it's an amazing place to start. As for the down sides, the math requirements in my opinion are a little steeper than the back cover implies. It pretty much assumes that you know complex variables and the residue theorem, and although it avoids the more difficult PDEs, it might help to know some things about them. And this isn't really a down side, but a lot of interesting information is tied to the problems, which may bother some readers.

This book is one of the most stimulating books on fluid mechanics that I have come across. It is very carefully written and well organized. The physics behind the phenomena are vividly explained. The subject is, however, mathematically difficult and the book should not be attempted without advanced calculus and vector analysis.

This book is well organized and full of examples, but it's will be better to explain more about the math operation and what does it means in the real world.

Not for running purposes. Not at all! Be very careful with the Achiles .Good for walking but an extra sole pad is necessary

Elementary Fluid Dynamics (Oxford Applied Mathematics and Computing Science Series) Numerical Solution of Partial Differential Equations: Finite Difference Methods (Oxford Applied Mathematics and Computing Science Series) Principles of Mathematical Analysis (International Series in Pure and Applied Mathematics) (International Series in Pure & Applied Mathematics) Numerical Analysis: Mathematics of Scientific Computing (The Sally Series; Pure and Applied Undergraduate Texts, Vol. 2) Biomedical Statistics with Computing (Medical Computing Series) Differential Equations and Their Applications: An Introduction to Applied Mathematics (Texts in Applied Mathematics) (v. 11) Introduction to the Foundations of Applied Mathematics (Texts in Applied Mathematics) Elementary Linear Programming with Applications, Second Edition (Computer Science & Scientific Computing Series) The Lattice Boltzmann Equation for Fluid Dynamics and Beyond (Numerical Mathematics and Scientific Computation) An Introduction to Scientific

Computing: Twelve Computational Projects Solved with MATLAB (Texts in Applied Mathematics) Concurrent Scientific Computing (Texts in Applied Mathematics) Programmed Inequality: How Britain Discarded Women Technologists and Lost Its Edge in Computing (History of Computing) Fractal Geometry and Dynamical Systems in Pure and Applied Mathematics I: Fractals in Pure Mathematics (Contemporary Mathematics) ELEMENTARY SCIENCE 2000 TRADE LIBRARY WHATS THE BIG IDEA BEN FRANKLIN COPYRIGHT 2000 (Elementary Science Trade Library) Bio-mechanisms of Swimming and Flying: Fluid Dynamics, Biomimetic Robots, and Sports Science Computational Fluid Dynamics Simulation of Spray Dryers: An EngineerÃ¢ ¬â„¢s Guide (Advances in Drying Science and Technology) Rarefied Gas Dynamics: From Basic Concepts to Actual Calculations (Cambridge Texts in Applied Mathematics) Fluid, Electrolyte, and Acid-Base Disorders in Small Animal Practice, 4e (Fluid Therapy In Small Animal Practice) Elementary and Middle School Mathematics: Teaching Developmentally (8th Edition) (Teaching Student-Centered Mathematics Series) Compressible Fluid Dynamics (Advanced engineering series)