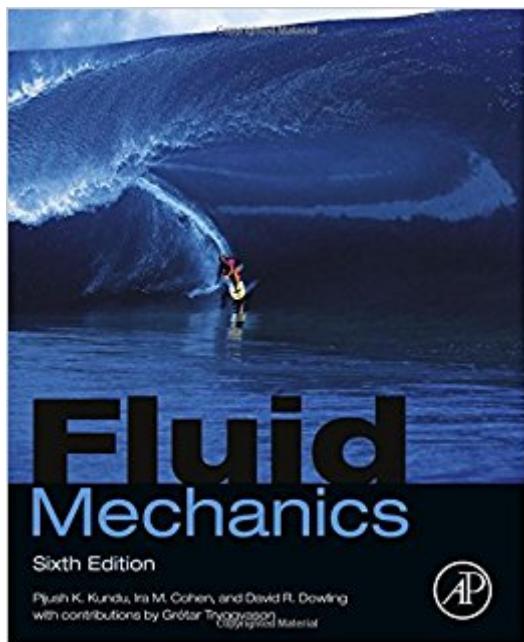


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# Fluid Mechanics, Sixth Edition



## Synopsis

The classic textbook on fluid mechanics is revised and updated by Dr. David Dowling to better illustrate this important subject for modern students. With topics and concepts presented in a clear and accessible way, Fluid Mechanics guides students from the fundamentals to the analysis and application of fluid mechanics, including compressible flow and such diverse applications as aerodynamics and geophysical fluid mechanics. Its broad and deep coverage is ideal for both a first or second course in fluid dynamics at the graduate or advanced undergraduate level, and is well-suited to the needs of modern scientists, engineers, mathematicians, and others seeking fluid mechanics knowledge. Over 100 new examples designed to illustrate the application of the various concepts and equations featured in the text. A completely new chapter on computational fluid dynamics (CFD) authored by Prof. Gretar Tryggvason of the University of Notre Dame. This new CFD chapter includes sample Matlab™ codes and 20 exercises. New material on elementary kinetic theory, non-Newtonian constitutive relationships, internal and external rough-wall turbulent flows, Reynolds-stress closure models, acoustic source terms, and unsteady one-dimensional gas dynamics. Plus 110 new exercises and nearly 100 new figures.

## Book Information

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## Customer Reviews

"Fluid mechanics,...is introduced and comprehensively covered in this widely adopted text. Revised and updated...this book...is suitable for both a first or second course in fluid mechanics at the graduate or advanced undergraduate level." --Zentralblatt MATH

While in college, David R. Dowling held summer positions at Hughes Aircraft Co. and the Los Angeles Air Force Station. He completed his doctorate in 1988 at Graduate Aeronautical Laboratories of the California Institute of Technology and moved north to Seattle to accommodate his wife's career in medicine. While there, he worked for a year in the laser technology group at Boeing Aerospace, and then for almost three years as a post-doc at the Applied Physics Laboratory of the University of Washington. In 1992, he accepted a faculty position at the University of Michigan. Prof. Dowling is currently conducting research in acoustics and fluid mechanics. He is a fellow of the Acoustical Society of America, a member of the American Society of Mechanical Engineers, and a member of the American Physical Society. He is a US citizen. Positions at the University of Michigan : Professor, Sept 2005 to Present Associate Professor, Sept 1999 thru August 2005Assistant Professor, Sept 1992 thru August 1999Visiting Assistant Professor, July 1992 thru August 1992

The content: This book is good for advanced fluid mechanics theory but lacks in examples. Unfortunately this is the case for most upper level topics. Apparently this is an improvement from the previous edition, in which people complained of having example problems moved to exercises at the end of the chapters. As far as the material, I am still able to learn from it, which is all I can ask for in a book. However, if you were to ask whether it is possible to teach yourself advanced fluid mechanics, the answer would be no. You need an instructor that can walk with you through this book. The physical book: The paper is a nice and thick high quality paper, but on mine the cover was attached backward (i.e., page 1 is near the back cover of the book and is upside down). It's kind of funny haha

This text contains a large amount of valuable information and necessary derivations for the understanding of fluids. However, the text seems to be organized in an odd fashion with seemingly connected topics separated across the book. The text contains some examples, but would certainly benefit from more. Apparently this is still an improvement over the previous edition. This text uses Einstein Summation Notation - for those not already familiar with this topic, an additional guide will be needed as the review of notation in this text is cursory. With a knowledgeable teacher and this book as a reference, the topic is manageable. I would not expect to learn the fundamentals of fluids, let alone more advanced topics from this book alone.

good book if you want an A

Immediately upon opening the book for the first time the front cover ripped free of the rest of the book. Will be exchanging for another, hopefully this poor binding isn't the norm. UPDATE: I realized that I forgot to update the review for quite some time after receiving my second copy. However, the second one was returned as well for the exact same reason as the first. The cover is flimsily glued by the first and last pages to the rest of the book. Talking among my classmates who also purchased this edition of book, this problem was definitely present at varying levels with their copies as well. Though it has been a year since my original purchase, I would still be wary of ordering this edition.

Outstanding.

Great!

Beautiful book! Fast shipping!

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