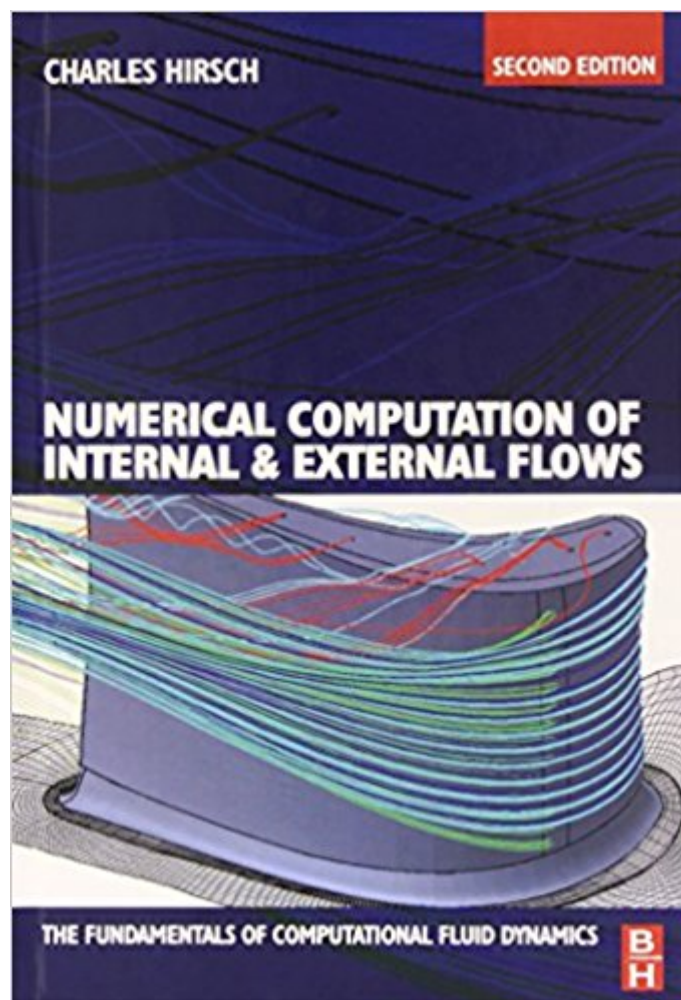




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# Numerical Computation Of Internal And External Flows: The Fundamentals Of Computational Fluid Dynamics, Second Edition



## Synopsis

The second edition of this book is a self-contained introduction to computational fluid dynamics (CFD). It covers the fundamentals of the subject and is ideal as a text or a comprehensive reference to CFD theory and practice. New approach takes readers seamlessly from first principles to more advanced and applied topics. Presents the essential components of a simulation system at a level suitable for those coming into contact with CFD for the first time, and is ideal for those who need a comprehensive refresher on the fundamentals of CFD. Enhanced pedagogy features chapter objectives, hands-on practice examples and end of chapter exercises. Extended coverage of finite difference, finite volume and finite element methods. New chapters include an introduction to grid properties and the use of grids in practice. Includes material on 2-D inviscid, potential and Euler flows, 2-D viscous flows and Navier-Stokes flows to enable the reader to develop basic CFD simulations. Includes best practice guidelines for applying existing commercial or shareware CFD tools.

## Book Information

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## Customer Reviews

The second edition of Numerical Computation of Internal and External Flows is a self-contained introduction to computational fluid dynamics (CFD). It covers the fundamentals of the subject required in an introductory course for senior undergraduate or graduate level students. It is also ideal for readers who need a comprehensive reference to CFD theory and practice, or as the basis for more advanced study and simulation development. Key Features: New approach takes readers seamlessly from first principles to more advanced and applied topics Presents the essential

components of a simulation system at a level suitable for those coming into contact with CFD for the first time, and is ideal for those who need a comprehensive refresher on the fundamentals of CFD. Enhanced pedagogy features chapter objectives, hands-on practice examples and end of chapter exercises. Extended coverage of finite difference, finite volume and finite element methods. New chapters include an introduction to grid properties and the use of grids in practice. Includes material on 2-D inviscid, potential and Euler flows, 2-D viscous flows, Navier-Stokes flows to enable the reader to develop basic CFD simulations.

This book is one of the best books on CFD with a lot of material in it (more like a reference book; good to have on the bookshelf) but unfortunately it is not very coherent and it is very hard to follow. If you are looking for some formula or some references of the topic you are working on then this could be for you. But if you want to learn CFD conceptually I would not recommend this book.

This is a review of the kindle version. The equations are blurry tiny pictures that are difficult to read. There are also some symbols that are also represented with pictures rather than characters (most of the greek letters, vectors, subscripts etc) , The overall treatment of the material is great. If you want this book get the paper version.

For people who like CFD, this is a great book to start with, I've just got it after I had read a couple of chapters from the ebook. The binding is not the best, but it is a very minor issue.

Every CFD engineer should have this book in their library. It's a classic to me.

it is written in more elegant content than the first edition. I think it can be a good reference or textbook for undergraduate or graduate students!

The new text is a huge improvement over Hirsch's previous two-volume text on the same subject. It's still arranged a bit like an encyclopedia rather than a textbook, but it could be the best introductory CFD text.

the book is very well written. however, the binding is messed up so badly that one cannot even leave the book opened on the table. it is extremely annoying when reading it.

When I ordered this book, the spine on the book covered was slanted so that, at the top, the cardboard backing was 1-2 mm past where it should be. So I sent the book back to get a new one, and they sent back a book with the exact same problem. At that point I gave up. The book seems decent enough, but I don't like spending over \$100 on a book with a messed up binding.

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