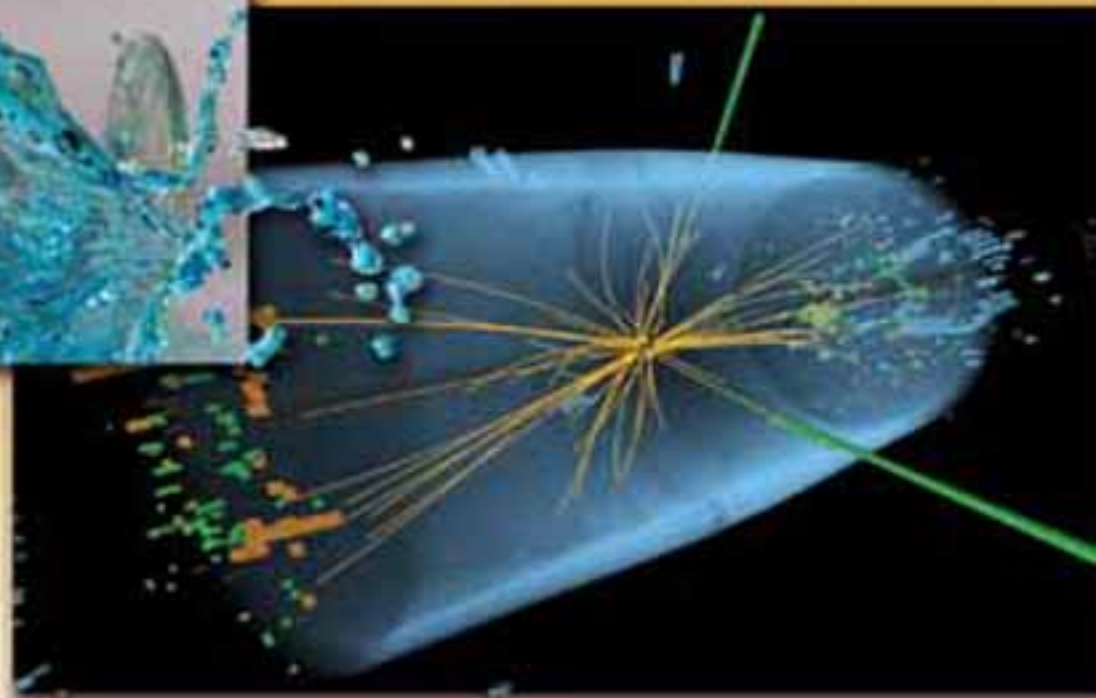


Revised Edition

FLUID DYNAMICS

**WITH COMPLETE HYDRODYNAMICS
AND BOUNDARY LAYER THEORY**

**For Honours, Postgraduate and
M. Phil. Students of
All Indian Universities, Engineering
Students and Various
Competitive Examinations**



Dr. M.D. RAISINGHANIA

S. CHAND

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First Edition 1982

Subsequent Editions and Reprints 1995, 96, 98, 2000, 2002, 2003, 2005, 2006, 2008, 2010, 2011
Eleventh Revised and Enlarged Edition 2013

ISBN : 81-219-0869-8

Code : 14D 349

PRINTED IN INDIA

By Rajendra Ravindra Printers Pvt. Ltd., 7361, Ram Nagar, New Delhi-110 055

and published by S. Chand & Company Pvt. Ltd., 7361, Ram Nagar, New Delhi -110 055.

FOREWORD

“Fluid dynamics” is one of the most important part of the recent interdisciplinary activities concerning engineering and technological developments. For this to be accomplished, Dr. M.D. Raisinghania has provided, in a single volume, nearly all the basic theory needed for a thorough grounding in the subject. The book is teachable, readable and most suitable for adoption for postgraduate and honours students of Indian universities. Numerous examples with illustrations and exercises at every step have made the book more useful for students, teachers and researchers.

I congratulate the author on his untiring efforts and I warmly recommend the book to scientists and engineers as well.

P.N. TANDON,
Professor and Head,
Department of Mathematics,
H.B.T.I. Kanpur, U.P.

*Dedicated to the
memory of my parents*

– M.D. Raisinghania

PREFACE TO THE ELEVENTH EDITION

Questions asked in recent papers of various university examinations have been inserted at appropriate places. Some articles solutions have been re-written. A miscellaneous set of problems is also provided at the end of this book. I hope that these changes will make the book more useful to the reader.

Suggestions for further improvement of the book will be gratefully received.

M.D. RAISINGHANIA

PREFACE TO THE NINTH REVISED EDITION

Due to recent changes in syllabi of various universities, a thorough revision of the book was overdue. Accordingly, each chapter of this book has been enlarged and rearranged. References to the latest papers of various universities and I.A.S. have been inserted at proper places. A set of objective problems has been provided at the end of chapters. An additional chapter, namely, Flow of a compressible viscous fluids has been added. Some matter of previous edition has been rearranged in form of two new chapters, namely, “The use of conformal representations. Aerofoils” and “Theory of very slow motion”.

I hope that these changes will make the material more accessible and more attractive to the reader. All valuable suggestions for further improvement of the book will be highly appreciated.

M.D. RAISINGHANIA

PREFACE TO THE SECOND EDITION

It gives me great pleasure to inform the reader that the previous edition of this book has been improved, well-organised and made up-to-date in the light of the latest syllabi of the various universities and suggestions received from the learned teachers, students and engineers from various universities and institutions of India. The following major changes have been made in the present edition:

- Errors and omissions of previous edition have been corrected.
- A detailed index has been provided at the end of this book.
- More solved examples have been added so that reader may gain more confidence in technique of solving problems.
- Matter of the previous edition has been re-organised so that now each topic gets its proper place in the book.
- Almost all chapters have been rewritten so that in the present form, the reader will not find any difficulty in understanding the subject matter.

In view of the above large scale improvements it can be assured that this new edition will surely prove more useful to the reader.

I am really thankful to the Director, Shri R.K. Gupta and Manager, Shri T. N. Goel for showing keen interest throughout the publication of this book. I am also thankful to Mrs. Dipika Sen for bringing out the book in nice form at a short period.

Suggestions for further improvement of the book will be gratefully received.

M.D. RAISINGHANIA

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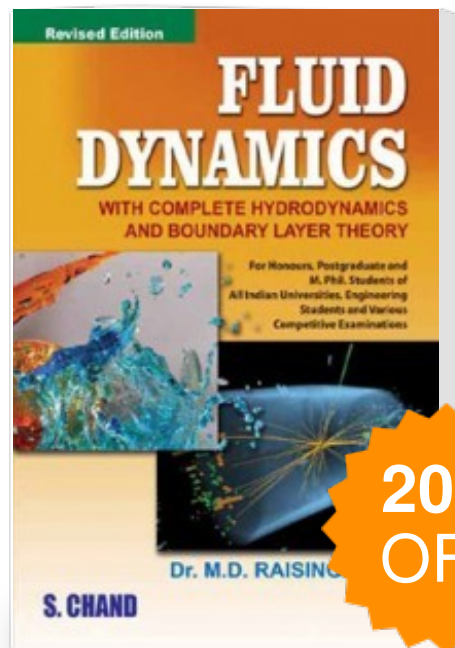
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Fluid Dynamics With Complete Hydrodynamics And Boundary Layer Theory



Publisher : SChand Publications ISBN : 9788121908696

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