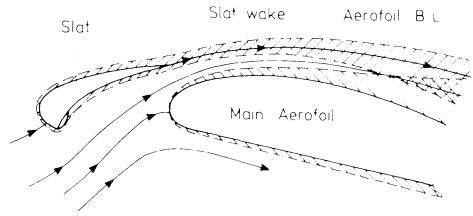
Turbulent Flows



Now available as a paperback:

Turbulence

Editor: P. Bradshaw
2nd corrected and updated edition 1978
47 figures, 4 tables. XI, 339 pages
(Topics in Applied Physics, Volume 12)
DM 49,—; US $27.00 ISBN 3-540-08864-4

Contents: *P. Bradshaw:* Introduction. — *H. H. Fernholz:* External Flows. — *J. P. Johnston:* Internal Flows. — *P. Bradshaw, J. D. Woods:* Geophysical Turbulence and Buoyant Flows. — *W. C. Reynolds, T. Cebeci:* Calculation of Turbulent Flows. — *B. E. Launder:* Heat and Mass Transport. — *J. L. Lumley:* Two-Phase and Non-Newtonian Flows

Acknowledging turbulence as the most important fluid dynamic phenomenon in engineering and the earth sciences, the second edition of this well-received monograph both examines and relates the turbulence problems encountered in aeronautics, mechanical and chemical engineering, metallurgy, and oceanography. In addition, methods for calculating turbulent flow fields and heat transfer are discussed in detail. Though each chapter is written by a specialist in his discipline, details concerning hardware are consistently de-emphasized, in order to make the material more accessible to the nonspecialist.
The new paperback edition incorporates several minor corrections, supplementary explanations, and a list of updated references cross-listed to appropriate sections in the text.

Turbulent Shear Flows I

Selected Papers from the First International Symposium on Turbulent Shear Flows, Pennsylvania State University, University Park, Pennsylvania, USA, April 18–20, 1977
Editors: F. Durst, B. E. Launder, F. W. Schmidt, J. H. Whitelaw
1979. 256 figures. VIII, 415 pages
Cloth DM 98,—; US $53.90 ISBN 3-540-09041-X

Contents: Free Flows. — Wall Flows. — Recirculating Flows. — Developments in Reynolds Stress Closures. — New Directions in Modeling.

Here is a survey of the latest developments in the calculation of turbulent shear flows, emphasizing their flow and heat transfer properties. Skillfully edited and carefully selected, a third of the papers presented at the symposium have been included in this volume. Each section is preceded by an introductory review article contributed by the editors so that the volume provides a major and unified statement on the field.

Recent Developments in Theoretical and Experimental Fluid Mechanics — Compressible and Incompressible Flows

Editors: U. Müller, K. G. Roesner, B. Schmidt
1979. 380 figures. XXV, 642 pages (163 in German)
Cloth DM 88,—; US $48.40 ISBN 3-540-09228-5

Contents: *Compressible Flow:* Transonic Flow. Supersonic Flow. Nozzle Flow. Rarefied Gas Flow. Computational Gas Dynamics. — *Incompressible Flow:* Stability Phenomena. Boundary Layer. Jet Flow. Airfoil Theory. Fluid Machinery. Miscellaneous Problems.

The various aspects of conceptual mathematical, numerical and experimental fluid mechanics are the subject of the 62 research papers and survey articles contained in this volume, dedicated to Prof. J. Zierep.

Structure and Mechanisms of Turbulence

Proceedings of the Symposium on Turbulence Held at the Technische Universität Berlin, August 1–5, 1977
Editor: H. Fiedler
In two volumes

Part I:
1978. 210 figures, 5 tables. XX, 295 pages
(Lecture Notes in Physics, Volume 75)
DM 32,—; US $17.60 ISBN 3-540-08765-6

Part II:
1978. 209 figures, 3 tables. XX, 406 pages
(Lecture Notes in Physics, Volume 76)
DM 39,—; US $21.50 ISBN 3-540-08767-2

Turbulence Seminar

Berkeley 1976/77
Organized by A. Chorin, J. Marsden, S. Smale
Editors: P. Bernard, T. Ratiu
1977. 40 figures. V, 155 pages
(Lecture Notes in Mathematics, Volume 615)
DM 21.50, US $11.90 ISBN 3-540-08445-2

Prices are subject to change without notice

Springer-Verlag
Berlin
Heidelberg
New York

5528/5.1