

PREDICTION OF TURBULENT FLOWS

The prediction of turbulent flows is of paramount importance in the development of complex engineering systems involving flow, heat and mass transfer, and chemical reactions. Arising from a programme held at the Isaac Newton Institute in Cambridge, England, this volume reviews the current situation regarding the prediction of such flows through the use of modern computational fluid dynamics techniques, and attempts to address the inherent problem of modelling turbulence. In particular, the current physical understanding of such flows is summarised and the resulting implications for simulation discussed. The volume continues by surveying current approximation methods whilst discussing their applicability to industrial problems. This major work concludes by providing a specific set of guidelines for selecting the most appropriate model for a given problem. Unique in its breadth and critical approach, the book will be of immense value to experienced practitioners and researchers, continuing the UK's strong tradition in fluid dynamics.

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Edited by G. F. Hewitt and J. C. Vassilicos
Frontmatter
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