Editors

Dr. Cedric Taylor

Department of Civil Engineering, University of Wales, Swansea, U.K.

Dr. Philip M. Gresho

Lawrence Livermore Laboratory, University of California, Livermore, California 94550, U.S.A.

Advisory Editors Professor O. C. Zienkiewicz

Department of Civil Engineering, University of Wales, Swansea, U.K.

Editorial Board

A. J. Baker

University of Tennessee, Department of Engineering Science and Mechanics, 317 Perkins Hall, Knoxville, Tennessee 37916, U.S.A.

M. Bercovier

Division of Applied Mathematics, School of Applied Science and Technology, The Hebrew University of Jerusalem, Givot Ram, Jerusalem, Israel.

J. Donea

Applied Mechanics Division, Joint Research Centre, Ispra Establishment, 21020 Ispra (Varese), Italy.

D. J. Evans

Department of Computer Studies, University of Technology, Loughborough, Leicestershire, U.K.

B. A. Finlayson

Dept. of Chemical Engineering, BF-10, University of Washington, Seattle, Washington 98195, U.S.A.

D. K. Gartling

Fluid Mechanics and Heat Transfer Division 5511, Sandia Laboratories, Albuquerque, New Mexico 87115, U.S.A.

R. Glowinski

I.R.I.A., Domaine de Voluceau-Rocquencourt, B.P. 105, 78150 Le Chesnay, France.

M. Godet

I.N.S.A., Laboratoire de Mecanique des Contacts Bt 113, 20 Avenue Albert Einstein, 69621 Villeurbanne Cedex, Lyons, France.

W. G. Habashi

Department of Mechanical Engineering, Concordia University, 1455 de Maisonneuve Blvd. West, Montreal, Quebec H3G 1M8, Canada.

T. J. R. Hughes

Division of Applied Mechanics, Stanford University, Stanford, California 94305, U.S.A.

A. G. Hutton

Central Electricity Generating Board, Berkeley Nuclear Laboratories, Berkeley, Gloucestershire, U.K.

M. Kawahara

Chuo University, Department of Civil Engineering, Kasuga 1-chome 13, Bunkyo-ku, Tokyo, Japan.

R. L. Lee

Lawrence Livermore Laboratory, Atmospheric and Geophysical Science Division, Physics Department, University of California, Livermore, California 94550, U.S.A.

B. P. Leonard

City University of New York, College of Staten Island, 95 Sparkill Avenue, Staten Island, New York 10304, U.S.A.

J. N. Lillington

Fast Reactor Group, TASD, Atomic Energy Establishment, Winfrith, Dorchester, Dorset DT2 8DH, U.K.

U. Meissner

Universität Hannover, Lehrstuhl für Stromungsmechanik, Callinstr. 32, D-3000 Hannover, West Germany.

J. T. Oden

Engineering Mechanics, The University of Texas at Austin, Austin, Texas 78712, U.S.A.

M. D. Olson

The University of British Columbia, Department of Civil Engineering, 2075 Wesbrook Place, Vancouver, British Columbia, Canada V6T 1W5.

G. F. Pinder

Princeton University, Department of Civil Engineering, School of Engineering/Applied Science, Princeton, New Jersey 08544, U.S.A.

J. N. Reddy

Virginia Polytechnic Institute and State University, Department of Engineering Science and Mechanics, Norris Hall, Room 220, Blacksburg, Virginia 24061, U.S.A.

P. J. Roache Ecodynamics, Research Associates Inc., P.O. Box 8172, Albuquerque, New Mexico 87108, U.S.A.

R. L. Sani CIRES, University of Colorado at Boulder, Boulder, Colorado 80309, U.S.A.

S. F. Shen Cornell University, Sibley School of Mechanical and Aerospace Engineering, Upson and Grumman Halls, Ithaca, New York 14853, U.S.A.

D. B. Spaiding Imperial College of Science and Technology, Department of Mechanical Engineering, Exhibition Road, London SW7 2BX, U.K.

R. L. Taylor University of California, Department of Civil Engineering, Berkeley, California 94720, U.S.A.

M. Wolfshtein

Technion University, Aero Engineering Department, Haifa, Israel.

N. Yanenko

U.S.S.R. Academy of Sciences, Siberian Division, 630090 Novosibirsk 90, Institutskaya ul 4/1, U.S.S.R.

Published quarterly by John Wiley & Sons Ltd. 1981 subscription prices: to U.K. £37.50, elsewhere U.S. \$85.00. Application to mail at Second-Class Postage Rate is pending at New York, N.Y. U.S. Mailing Agent is Expediters of the Printed Word, Ltd., 527 Madison Avenue, New York, N.Y. 10022. Orders should be addressed to: Subscriptions Department, John Wiley & Sons Ltd., Baffins Lane, Chichester, Sussex, England. Copyright © 1981 by John Wiley & Sons Ltd. Printed in Northern Ireland at The Universities Press (Belfast) Ltd.

International Journal for Numerical Methods in FLUIDS

Professor R. H. Gallagher

Dean of the College of Engineering, University of Arizona, Tucson, Arizona 85721, U.S.A.