

JOURNAL OF COMPUTATIONAL PHYSICS

Editor

Greтар Tryggvason

Worcester Polytechnic Institute, Worcester, Massachusetts

Associate Editors

Rémi Abgrall
Université Bordeaux I
Talence, France

Michael Baines
University of Reading
Reading, United Kingdom

Alvin Bayliss
Northwestern University
Evanston, Illinois

John P. Boyd
University of Michigan
Ann Arbor, Michigan

Shiyi Chen
The Johns Hopkins University
Baltimore, Maryland

Haecheon Choi
Seoul National University
Seoul, S. Korea

Phillip Colella
Lawrence Berkeley
National Laboratory
Berkeley, California

Pierre Degond
Centre National de la
Recherche Scientifique
Toulouse, France

Ron Fedkiw
Stanford University Stanford,
California

Alex Friedman
Lawrence Livermore
National Laboratory
Livermore, California

George Karniadakis
Brown University Providence,
Rhode Island

Dana A. Knoll
Los Alamos National
Laboratory
Los Alamos, New Mexico

Petros Koumoutsakos
Swiss Federal Institute
of Technology
Zürich, Switzerland

William R. Martin
University of Michigan
Ann Arbor, Michigan

Parviz Moin
Stanford University
Stanford, California

Stanley J. Osher
University of California
Los Angeles, California

Annick Pouquet
National Center for
Atmospheric Research
Boulder, Colorado

Tamar Schlick
New York University
New York, New York

Berend Smit
Universiteit van
Amsterdam,
Amsterdam,
The Netherlands

Piotr K. Smolarkiewicz
National Center for
Atmospheric Research
Boulder, Colorado

John Strain
University of California
Berkeley, California

Tao Tang
The Hong Kong Baptist University
Kowloon Tong,
Hong Kong

Eli Turkel
Tel Aviv University
Tel Aviv, Israel

Evgenii V. Vorozhtsov
Institute of Theoretical and
Applied Mechanics
Novosibirsk, Russia

Pieter Wesseling
Delft University of
Technology Delft,
The Netherlands

Takashi Yabe
Tokyo Institute of
Technology,
Tokyo, Japan

Stéphane Zaleski
Université Pierre et Marie
Curie
Paris, France

Jianxian Qiu
Nanjing University
Nanjing, P.R. China

Editors Emeriti: Jeremiah U. Brackbill
John Killeen
Phil L. Roe

Aims and scope of the journal: The mission of the *Journal of Computational Physics* is to publish material that will assist in the reliable and accurate solution of scientific problems by numerical computation.

Publication information: *Journal of Computational Physics* (ISSN 0021-9991). For 2006, volumes 213–219 are scheduled for publication. Subscription prices are available upon request from the Publisher or from the Regional Sales Office nearest you or from the journal's website (<http://www.elsevier.com/locate/jcp>). Further information is available on this journal and other Elsevier products through Elsevier's website: (<http://www.elsevier.com>). Subscriptions are accepted on a prepaid basis only and are entered on a calendar year basis. Issues are sent by standard mail (surface within Europe, air delivery outside Europe). Priority rates are available upon request. Claims for missing issues should be made within six months of the date of dispatch.

Orders, claims, and journal enquiries: please contact the Customer Service Department at the Regional Sales Office nearest you:

Orlando: Elsevier, Customer Service Department, 6277 Sea Harbor Drive, Orlando, FL 32887-4800, USA; phone: (877) 8397126 or (800) 6542452 [toll free numbers for US customers]; (+1) (407) 3454020 or (+1) (407) 3454000 [customers outside US]; fax: (+1) (407) 3631354 or (+1) (407) 3639661; e-mail: usjcs@elsevier.com or elspecs@elsevier.com

Amsterdam: Elsevier, Customer Service Department, PO Box 211, 1000 AE Amsterdam, The Netherlands; phone: (+31) 20 4853757; fax: (+31) 20 4853432; e-mail: nlinfo-f@elsevier.com

Tokyo: Elsevier, Customer Service Department, 4F Higashi-Azabu, 1-Chome Bldg, 1-9-15 Higashi-Azabu, Minato-ku, Tokyo 106-0044, Japan; phone: (+81) (3) 5561 5037; fax: (+81) (3) 5561 5047; e-mail: jp.info@elsevier.com

Singapore: Elsevier, Customer Service Department, 3 Killiney Road, #08-01 Winsland House I, Singapore 239519; phone: (+65) 6349 0222; fax: (+65) 6733 1510; e-mail: asiainfo@elsevier.com

Advertising information: Advertising orders and enquiries can be sent to: **South America:** Mr Tino DeCarlo, The Advertising Department, Elsevier Inc., 360 Park Avenue South, New York, NY 10010-1710, USA; phone: (+1) (212) 633 3815; fax: (+1) (212) 633 3820; e-mail: t.decarlo@elsevier.com. **Europe, USA, Canada and ROW:** Advertising orders and enquiries can be sent to: e-mail: commercialsales@elsevier.com. Miss Katrina Barton, phone: (+44) (0) 20 7611 4117; fax: (+44) (0) 20 7611 4463.

US mailing notice: *Journal of Computational Physics* (ISSN 0021-9991) is published semimonthly in January, March, May, July, September, November and monthly in February, April, June, August, October and December by Elsevier Inc. (P.O. Box 211, 1000 AE Amsterdam, The Netherlands). Annual subscription price in the USA US\$ 14,917 (valid in North, Central and South America), including air speed delivery. Periodical postage rate paid at Jamaica, NY 11431.

USA POSTMASTER: Send change of address to *Journal of Computational Physics*, Elsevier, 6277 Sea Harbor Drive, Orlando, FL 32887-4800.

AIRFREIGHT AND MAILING in the USA by Publications Expediting Inc., 200 Meacham Avenue, Elmont, NY 11003.

Language Editing: International Science Editing and Asia Science Editing can provide English language and copyediting services to authors who want to publish in scientific, technical and medical journals and need assistance **before** they submit their article or **before** it is accepted for publication. Authors can contact these services directly: International Science Editing (<http://www.internationalscienceediting.com>) and Asia Science Editing (<http://www.asiascienceediting.com>) or, for more information about language editing services, please contact authorsupport@elsevier.com who will be happy to deal with any questions.

Please note Elsevier neither endorses nor takes responsibility for any products, goods or services offered by outside vendors through our services or in any advertising. For more information please refer to our terms conditions (http://authors.elsevier.com/terms_and_conditions.html).

♻ The paper used in this publication meets the requirements of ANSI/NISO Z39.48-1992 (Permanence of Paper)