

JOURNAL OF COMPUTATIONAL PHYSICS

Editor

Gretar Tryggvason

Worcester Polytechnic Institute, Worcester, Massachusetts

Associate Editors

Rémi Abgrall
Université Bordeaux I
Talence, France

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

Ron Fedkiw
Stanford University
Stanford, California

George Karniadakis
Brown University Providence,
Rhode Island

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

Barry Koren
Centre for Mathematics and
Computer Science
Amsterdam, The Netherlands

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

Jianxian Qiu
Nanjing University
Nanjing, P.R. China

Tamar Schlick
New York University
New York, New York

John Shadid
Sandia National Laboratories
Albuquerque, USA

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

John Strain
University of California
Berkeley, California

Huazhong Tang
Peking University
Peking, P.R. China

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

Takashi Yabe
Tokyo Institute of
Technology,
Tokyo, Japan

Stéphane Zaleski
Université Pierre et Marie
Curie
Paris, France

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 2008, volume 227 is 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 [toll free within the USA]; (+1) (407) 5636022 [outside the USA]; fax: (+1) (407) 3631354; e-mail: JournalCustomerService-usa@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: JournalsCustomerServiceEMEA@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: JournalsCustomerServiceJapan@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: JournalsCustomerServiceAPAC@elsevier.com

Advertising information: Advertising orders and enquiries can be sent to: James Kenney, Elsevier Ltd., 32 Jamestown Road, London NW1 7BY, UK; phone: (+44) 207 424 4216; fax: (+44) 1865 853 136; e-mail: j.kenney@elsevier.com. Customers in the US and Canada can also contact: Mr Tino DeCarlo, 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

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). Periodical postage rate paid at Rahway, NJ and additional mailing offices.

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 Mercury International Limited, 365, Blair Road, Avenel, NJ 07001.

Language services: Authors who require information about language editing and copyediting services pre- and post-submission please visit <http://www.elsevier.com/locate/languagepolishing> or contact authorsupport@elsevier.com for more information. 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://www.elsevier.com/termsandconditions>

Upon acceptance of an article. Authors will be asked to transfer copyright (for more information on copyright see www.elsevier.com/permissions). This transfer will ensure the widest possible dissemination of information. A letter will be sent to the corresponding Author confirming receipt of the manuscript. A form facilitating transfer of copyright will be provided.

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