
VOLUME 64 NUMBER 212



OCTOBER 1995

MATHEMATICS OF COMPUTATION

AMERICAN MATHEMATICAL SOCIETY

EDITED BY

James H. Bramble
Susanne C. Brenner
Howard Elman
Walter Gautschi, *Managing Editor*
Eugene Isaacson
James N. Lyness
Harald Niederreiter
Syvert P. Nørsett
Andrew M. Odlyzko
Frank W. J. Olver
John E. Osborn
Stanley Osher
Carl Pomerance
René Schoof
L. Ridgway Scott
Daniel Shanks
Chi-Wang Shu
Frank Stenger
Hans J. Stetter
G. W. Stewart
Nico M. Temme
Vidar Thomée
Lars B. Wahlbin
Joseph D. Ward
Hugh C. Williams
John W. Wrench, Jr.
Stephen J. Wright

PROVIDENCE, RHODE ISLAND USA

ISSN 0025-5718

Mathematics of Computation

This journal publishes research articles in computational mathematics. Areas covered include numerical analysis, the application of computational methods, algorithms for advanced computer architectures, computational number theory and algebra, and related fields. Table errata and reviews of books in areas related to computational mathematics are also included.

Subscription information. *Mathematics of Computation* is published quarterly. Subscription prices for Volume 64 (1995) are \$274 list; \$219 institutional member; \$178 member of CBMS organizations; \$164 individual AMS member. A late charge of 10% of the subscription price will be imposed upon orders received from nonmember institutions and organizations after January 1 of the subscription year. Subscribers outside the United States and India must pay a postage surcharge of \$9; subscribers in India must pay a postage surcharge of \$18. Expedited delivery to destinations in North America \$13; elsewhere \$40.

Back number information. For back issues see the *AMS Catalog of Publications*.

Subscriptions and orders should be addressed to the American Mathematical Society, P. O. Box 5904, Boston, MA 02206-5904. *All orders must be accompanied by payment.* Other correspondence should be addressed to P. O. Box 6248, Providence, RI 02940-6248.

Unpublished Mathematical Tables. The editorial office of the journal maintains a repository of Unpublished Mathematical Tables (UMT). When a table is deposited in the UMT repository a brief summary of its contents is published in the section *Reviews and Descriptions of Tables and Books*. Upon request, the chairman of the editorial committee will supply copies of any table for a nominal cost per page. All tables and correspondence concerning the UMT should be sent to Walter Gautschi, Chairman, Editorial Committee, Mathematics of Computation, Department of Computer Sciences, Purdue University, West Lafayette, IN 47907.

Copying and reprinting. Material in this journal may be reproduced by any means for educational and scientific purposes without fee or permission with the exception of reproduction by services that collect fees for delivery of documents and provided that the customary acknowledgment of the source is given. This consent does not extend to other kinds of copying for general distribution, for advertising or promotional purposes, or for resale. Requests for permission for commercial use of material should be addressed to the Assistant Director of Production, American Mathematical Society, P.O. Box 6248, Providence, Rhode Island 02940-6248. Requests can also be made by e-mail to reprint-permission@math.ams.org.

Excluded from these provisions is material in articles for which the author holds copyright. In such cases, requests for permission to use or reprint should be addressed directly to the author(s). (Copyright ownership is indicated in the notice in the lower right-hand corner of the first page of each article.)

Mathematics of Computation is published quarterly by the American Mathematical Society at 201 Charles Street, Providence, RI 02904-2213. Second-class postage is paid at Providence, Rhode Island. Postmaster: Send address changes to Mathematics of Computation, American Mathematical Society, P. O. Box 6248, Providence, RI 02940-6248.

© Copyright 1995 by the American Mathematical Society. All rights reserved.

This journal is indexed in *Science Citation Index*®, *SciSearch*®, *Research Alert*®, *CompuMath Citation Index*®, *Current Contents*®/Physical, Chemical & Earth Sciences. Printed in the United States of America.

⊗ The paper used in this book is acid-free and falls within the guidelines established to ensure permanence and durability.

♻ Printed on recycled paper.

This publication was typeset using $\mathcal{A}\mathcal{M}\mathcal{S}$ - $\mathcal{T}\mathcal{E}\mathcal{X}$,
the American Mathematical Society's $\mathcal{T}\mathcal{E}\mathcal{X}$ macro system.

10 9 8 7 6 5 4 3 2 1 00 99 98 97 96 95

As of January 1, 1996
all material submitted to
MATHEMATICS OF COMPUTATION

should be sent to

Professor Lars B. Wahlbin
Department of Mathematics
Cornell University
Ithaca, NY 14853
