FOURTH IEEE SYMPOSIUM ON
COMPUTER ARITHMETIC

October 25-27, 1978
Santa Monica, California, U.S.A.

sponsored by
IEEE Computer Society in cooperation
with the UCLA Computer Science Department

Symposium Chairman
Miloš D. Ercegovac, University of California, Los Angeles, U.S.A.

Technical Program Chairman
Algirdas Avižienis, University of California, Los Angeles, U.S.A.

Program Committee
Daniel E. Atkins, University of Michigan, U.S.A.
Tien Chi Chen, IBM San Jose Res. Lab., U.S.A.
Jean P. Chinal, ENSAE, Toulouse, France
William J. Cody, Argonne National Lab., Illinois, U.S.A.
Luigi Dadda, Politecnico di.Milano, Italy
Miloš D. Ercegovac, University of California, Los Angeles, U.S.A.
Robert T. Gregory, University of Tennessee, U.S.A.
Peter Kornerup, University of Aarhus, Denmark
E.V. Krishnamurthy, Indian Institute of Science, Bangalore, India
David W. Matula, Southern Methodist University, Dallas, Texas, U.S.A.
James E. Robertson, University of Illinois, U.S.A.
Bruce D. Shriver, University of S. Louisiana, U.S.A.

Publicity Chairman
Daniel E. Atkins,
University of Michigan, U.S.A.

Treasurer
Melvin M. Takata,
Hughes Aircraft Corporation
Culver City, California, U.S.A.

Local Arrangements Chairman
J. Walter Bond,
Hughes Aircraft Corporation
Culver City, California, U.S.A.
Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limits of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through the Copyright Clearance Center, P.O. Box 765, Schenectady, NY 12301. Instructors are permitted to photocopy isolated articles for noncommercial classroom use without fee. For other copying, reprint or republication permission, write to Director, Publishing Services, IEEE, 345 E. 47th Street, New York, NY 10017. All rights reserved. Copyright © 1978 by The Institute of Electrical and Electronics Engineers, Inc.