

CODEN: BAMOAD  
VOLUME 78  
NUMBER 4

PAGES 487-628  
JULY 1972  
ISSUE 740

BULLETIN  
*of the*  
AMERICAN MATHEMATICAL SOCIETY

*Edited by*

GIAN-CARLO ROTA      M. H. PROTTER  
HANS F. WEINBERGER

*Published by the*  
AMERICAN MATHEMATICAL SOCIETY  
PROVIDENCE, RHODE ISLAND

## AMERICAN MATHEMATICAL SOCIETY

Business Office: P.O. Box 6248, Providence, Rhode Island 02904

Gordon L. Walker, Executive Director

Lincoln K. Durst, Deputy Director

### OFFICERS

*President:* Nathan Jacobson, Department of Mathematics, Yale University, New Haven, Connecticut 06520

*President-elect:* Saunders Mac Lane, Department of Mathematics, Eckhart Hall, University of Chicago, Chicago, Illinois 60637

*Vice-Presidents:* Richard D. Anderson, Department of Mathematics, Louisiana State University, Baton Rouge, Louisiana 70803; R. Creighton Buck, Department of Mathematics, University of Wisconsin, Madison, Wisconsin 53706; Edwin H. Spanier, Department of Mathematics, University of California, Berkeley, California 94720

*Secretary:* Everett Pitcher, Department of Mathematics, Lehigh University, Bethlehem, Pennsylvania 18015

*Associate Secretaries:* Paul T. Bateman, Department of Mathematics, University of Illinois, Urbana, Illinois 61801; Walter H. Gottschalk, Department of Mathematics, Wesleyan University, Middletown, Connecticut 06457; Orville G. Harrold, Jr., Department of Mathematics, Florida State University, Tallahassee, Florida 32306; Kenneth A. Ross, Department of Mathematics, University of Oregon, Eugene, Oregon 97403

*Treasurer:* W. T. Martin, Department of Mathematics, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139

*Board of Trustees:* Paul T. Bateman, Department of Mathematics, University of Illinois, Urbana, Illinois 61801; Nathan Jacobson (ex officio); Irving Kaplansky, Department of Mathematics, University of Chicago, Chicago, Illinois 60637; W. T. Martin (ex officio); Richard S. Palais, Department of Mathematics, Brandeis University, Waltham, Massachusetts 02154; Calvin C. Moore, Department of Mathematics, University of California, Berkeley, California 94720; Murray H. Protter, Department of Mathematics, University of California, Berkeley, California 94720

*Council Members:* See inside back cover.

### CHAIRMEN OF EDITORIAL AND COMMUNICATION COMMITTEES

*Bulletin Editorial Committee:* Murray H. Protter, Department of Mathematics, University of California, Berkeley, California 94720

*Proceedings Editorial Committee:* Joseph J. Rotman, University of Illinois, Urbana, Illinois 61801

*Transactions and Memoirs Editorial Committee:* Steve Armentrout, Department of Mathematics, Pennsylvania State University, University Park, Pennsylvania 16802

*Mathematical Reviews Editorial Committee:* Richard S. Pierce, Department of Mathematics, University of Hawaii, Honolulu, Hawaii 96822

*Colloquium Editorial Committee:* Saunders Mac Lane, Department of Mathematics, Eckhart Hall, University of Chicago, Chicago, Illinois 60637

*Mathematical Surveys Editorial Committee:* Bertram Yood, Department of Mathematics, University of Oregon, Eugene, Oregon 97403

*Mathematics of Computation Editorial Committee:* Eugene Isaacson, Courant Institute of Mathematical Sciences, New York University, 251 Mercer Street, New York, New York 10012

*Committee to Monitor Problems in Communication:* Alex Rosenberg, Department of Mathematics, White Hall, Cornell University, Ithaca, New York 14850

*Representatives of the Society on the Board of Editors of the American Journal of Mathematics:* Hyman Bass, Department of Mathematics, Columbia University, New York, New York 10027; I. M. Singer, Department of Mathematics, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139

*Executive Editor of Mathematical Reviews:* Jacob Burlak, 1315 Hill Street, Ann Arbor, Michigan 48104

*Editor of Translations Projects:* S. H. Gould, American Mathematical Society, P.O. Box 6248, Providence, Rhode Island 02904

The annual dues of members of the Society are \$20, payable to the American Mathematical Society, P.O. Box 6248, Providence, Rhode Island 02904

---

THE BULLETIN OF THE AMERICAN MATHEMATICAL SOCIETY is published bimonthly in January, March, May, July, September and November. Price per annual volume is \$12. Subscriptions, orders for back numbers, and inquiries in regard to nondelivery of current numbers should be addressed to the American Mathematical Society, 321 South Main Street, P.O. Box 6248, Providence, Rhode Island 02904.

Second-class postage paid at Providence, Rhode Island and additional mailing offices.

Copyright © American Mathematical Society 1972

Printed in the United States of America