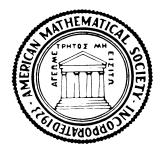
Bulletin (New Series) of the American Mathematical Society



EDITORS Felix E. Browder, Research-Expository Articles Meyer Jerison, Book Reviews Calvin C. Moore, Research Announcements

July 1982 Volume 7, Number 1, Pages 1–286 **Providence, Rhode Island USA** ISSN 0273-0979

BULLETIN (New Series) of the American Mathematical Society

Bulletin (New Series) contains articles of the types listed below. Information on Manuscript, Proof and Copying can be found at the back of this issue of the journal.

RESEARCH-EXPOSITORY PAPERS

These are by definition papers which present a clear and insightful exposition of significant aspects of contemporary mathematical research. Gibbs lectures and retiring presidential addresses will be included in this section. Manuscripts should be submitted to Professor Felix Browder, Department of Mathematics, University of Chicago, 5734 University Avenue, Chicago, Illinois 60637.

RESEARCH ANNOUNCEMENTS

The purpose of this department is to provide quick publication of new and significant results of interest to mathematicians. Collectively, the editorial board for research announcements will choose approximately fifteen papers for each issue of the BULLETIN. The deadlines for submission are August 15 for the January issue, October 1 for the March issue, December 1 for the May issue, February 1 for the July issue, April 1 for the September issue and June 1 for the November issue. Announcements are limited to 125 typed lines of 70 spaces each. Authors should send five copies of each manuscript (to speed the decision process) to Calvin C. Moore, Executive Editor for Research Announcements, Department of Mathematics, Evans Hall, University of California, Berkeley, California 94720. Authors are requested to include an introductory paragraph intelligible to the nonexpert stating the nature and significance of their results. Sketches and/or ideas of proof must be included.

REVIEWS OF BOOKS ON ADVANCED MATHEMATICS

Book Reviews should be sent to Professor Meyer Jerison, Department of Mathematics, Purdue University, West Lafayette, Indiana 47907.

SUBSCRIPTION INFORMATION: BULLETIN (New Series) of the American Mathematical Society is published bimonthly. Subscription prices for Vols. 6, 7 (1982) are \$36.00 list; \$18.00 member. The subscription price for members is included in the annual dues. Combination paper and microform (microfiche or microfilm) subscription prices are \$48.00 list; \$24.00 member. Microfiche of each issue will be mailed the fastest way before the camera copy is sent to the printer.

BACK NUMBER INFORMATION: Back number prices for BULLETIN (New Series) Volume 1, (1979) are \$36.00 list; \$27.00 member; for Volumes 2–5, \$18.00 list, \$13.50 member. Back number prices *per volume* for the BULLETIN of the American Mathematical Society which ceased publication in 1978 are: \$36.00 list, \$27.00 member (Volumes 1–84). Beginning with Vol. 84, back volumes are available on either 16mm positive or negative microfilm or on microfiche; prior volumes are available on microfilm only. The microfilm may be mounted on spools or in Kodak or 3M cartridges. Only current subscribers are eligible to purchase back volumes on microform. Write to the Society for a detailed price list. Subscriptions and orders for publication should be addressed to the American Mathematical Society, P.O. Box 1571, Annex Station, Providence, R.I. 02901. All orders must be accompanied by payment. Other correspondence should be addressed to the Society at P.O. Box 6248, Providence, R.I. 02940.

BULLETIN (New Series) of the American Mathematical (USPS 075640) is published bimonthly by the American Mathematical Society at 201 Charles Street, Providence, R. I 02904. Secondclass postage is paid at Providence, Rhode Island, and additional mailing offices. Postmaster: Send address changes to BULLETIN, American Mathematical Society, P.O. Box 6248, Providence, RI 02940.

> Copyright © American Mathematical Society 1982 Information on Copying can be found at the back of this journal.

Bulletin (New Series) of the American Mathematical Society

EDITORS

Felix E. Browder, Research-Expository Articles Meyer Jerison, Book Reviews Calvin C. Moore, Research Announcements

ASSOCIATE EDITORS

Hyman Bass Spencer Bloch S. S. Chern Charles L. Fefferman Frederick W. Gehring Ronald L. Graham Melvin Hochster Irving Kaplansky Robert P. Langlands

Richard K. Lashof Peter D. Lax Henry McKean, Jr. nan Richard Melrose ing John W. Milnor Hugh L. Montgomery Yiannis Moschovakis Gian-Carlo Rota ds I. M. Singer Harold M. Stark

VOLUME 7 · JULY through NOVEMBER · 1982

Providence, Rhode Island, USA ISSN 0273-0979