

TRANSACTIONS
OF THE
AMERICAN MATHEMATICAL SOCIETY

EDITED BY

D. A. BUCHSBAUM

H. P. McKEAN

J. J. KOHN

R. S. PALAIS

F. P. PETERSON

DANA SCOTT

VOLUME 130, NUMBER 2

FEBRUARY, 1968

PUBLISHED BY THE AMERICAN MATHEMATICAL SOCIETY

PROVIDENCE, RHODE ISLAND

1968

Journals Published by the
American Mathematical Society

Transactions of the American Mathematical Society

This journal is devoted entirely to research in pure and applied mathematics, and includes, in general, longer papers than the PROCEEDINGS.

The price per volume is \$12.00; in 1968 five volumes will be published. All inquiries for Volumes 1-69 should be directed to Johnson Reprint Corporation, 111 Fifth Avenue, New York, New York 10012. Orders for Volumes 70-130 should be directed to the American Mathematical Society.

Mathematical papers intended for publication in the TRANSACTIONS should be addressed to one of the editors:

Papers in analysis and applied mathematics to J. J. KOHN, Department of Mathematics, Brandeis University, Waltham, Massachusetts 02154.

Papers in algebra, logic and number theory to D. A. BUCHSBAUM, Department of Mathematics, Brandeis University, Waltham, Massachusetts 02154.

Papers in statistics and probability to H. P. MCKEAN, Department of Mathematics, Rockefeller University, New York, New York 10021.

Papers in geometry and abstract analysis to R. S. PALAIS, Department of Mathematics, Brandeis University, Waltham, Massachusetts 02154.

Papers in topology to F. P. PETERSON, Department of Mathematics, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139.

Papers in mathematical logic and foundations to DANA SCOTT, Department of Mathematics, Stanford University, Stanford, California 94305.

All other communications to the editors should be addressed to the Managing Editor, DANA SCOTT.

All papers should be typewritten, double-spaced, and the author should keep a complete copy.

Transactions of the American Mathematical Society is indexed regularly by Engineering Index, Inc.

Memoirs of the American Mathematical Society

These are a series of paperbound research tracts which are of the same general character as the papers published in the TRANSACTIONS. The editorial committee is identical with that for the TRANSACTIONS so that papers intended for publication in this series should be addressed to one of the editors listed above.

Published monthly by the American Mathematical Society. Subscriptions for Journals published by the American Mathematical Society should be addressed to American Mathematical Society, P.O. Box 6248, Providence, Rhode Island 02904.

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

Copyright © 1968 American Mathematical Society
All rights reserved
Printed in the United States of America

Journals Published by the
American Mathematical Society

Soviet Mathematics—Doklady

This journal contains the entire pure mathematics section of the DOKLADY AKADEMII NAUK SSSR in translation. It appears six times a year, each bimonthly issue corresponding to one volume of the Soviet DOKLADY. (The DOKLADY AKADEMII NAUK SSSR is issued three times a month, six issues constituting a volume.)

Notices of the American Mathematical Society

This journal announces the programs of the meetings of the Society. It carries the abstracts of all contributed papers presented at the meetings of the Society and publishes news items of interest to mathematical scientists.

All communications should be addressed to the Editor, P.O. Box 6248, Providence, Rhode Island 02904. News items and insertions for each issue must be in the hands of the editor on or before the deadline for the abstracts for papers to be presented at the meetings announced in that issue. These deadlines are published regularly on the back of the title page.

Mathematics of Computation

A journal devoted to original papers in numerical analysis, the application of numerical methods and high-speed calculator devices, the computation of mathematical tables, the theory of high-speed calculating devices and other aids to computation. In addition it publishes reviews and notes in these and related fields.

Chinese Mathematics—Acta

This is a cover to cover translation into English of Acta Mathematica Sinica, published by Academia Sinica, Peking, People's Republic of China. Acta Mathematica Sinica contains research in all fields of pure mathematics.

Mathematical Reviews

This journal is devoted to abstracts and reviews of the current mathematical literature of the world. Two volumes will be published in 1968, Volume 35 and Volume 36. Each volume will consist of 6 regular issues plus an index issue. In each regular issue the abstracts and reviews are grouped under subject headings. Publication began in 1940. Editorial correspondence should be sent to Mathematical Reviews, 416 Fourth Street, Ann Arbor, Michigan 48103.

Bulletin of the American Mathematical Society

This journal is the official organ of the Society. It reports official acts of the Society and the details of its meetings. It contains some of the officially invited addresses presented before the Society, reviews of advanced mathematical books, research problems and a department of research announcements.

One volume of six numbers is planned for 1968.

Proceedings of the American Mathematical Society

This journal is devoted entirely to research in pure and applied mathematics, and is devoted principally to the publication of original papers of moderate length. Volume 1 appeared in 1950. The journal contains a department called Shorter Notes. The purpose of this department is to publish very short papers of an unusually elegant and polished character, for which there is normally no other outlet.

One volume of six numbers is planned for 1968.

CONTENTS

Vol. 130

FEBRUARY, 1968

Whole No. 389

	Page
A description of all globally idempotent threads with zero By C. R. STOREY	185
Functors of Artin rings By MICHAEL SCHLESSINGER	208
A characterization of the double point structure of the projection of a polygonal knot in regular position By L. B. TREYBIG	223
Prime mappings By L. B. TREYBIG	248
A theorem on Riesz groups By J. R. TELLER	254
Schauder bases and Köthe sequence spaces By ED DUBINSKY and J. R. RETHERFORD	265
On constructing distribution functions; with applications to Lommel polynomials and Bessel functions By DANIEL MAKI	281
Approximation and Schoenflies extension of C^m -diffeomorphisms ($m \geq 0$) By J. L. PAUL	298
On the classification of transitive effective actions on Stiefel manifolds By WU-YI HSIANG and J. C. SU	322
Isomorphisms of simple Lie rings By E. A. KLOTZ	337
A fixed-point theorem for inward and outward maps By B. R. HALPERN and G. M. BERGMAN	353
Components of invertible elements in quotient algebras of operators By L. A. COBURN and A. LEBOW	359