Journals Published by the American Mathematical Society

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, and a department of research announcements.

The subscription price is \$12.00 per annual volume of six numbers.

Invited Addresses offered for publication should be sent to MURRAY GERSTEN-HABER, Department of Mathematics, University of Pennsylvania, Philadelphia, Pennsylvania 19104.

Book Reviews should be sent to GIAN-CARLO ROTA, Mathematics Department,

Massachusetts Institute of Technology, Cambridge, Massachusetts 02139.

All Research Announcements should be sent to M. H. PROTTER, Department of

Mathematics, University of California, Berkeley, California 94720.

All other communications to the editors should be sent to the Managing Editor,

All other communications to the editors should be sent to the Managing Editor, MURRAY GERSTENHABER, at the above address.

The members of the Council for 1968 are: R. D. Anderson, Louis Auslander, Paul T. Bateman, R. H. Bing, David H. Blackwell, Armand Borel, Raoul Bott, William Browder, Edgar H. Brown Jr., David Buchsbaum, R. C. Buck, C. W. Curtis, J. B. Diaz, Herbert Federer, Walter Feit, Avner Friedman, Kurt Friedrichs, Wolfgang H. Fuchs, Murray Gerstenhaber, Irving L. Glicksberg, John W. Green, P. R. Halmos, O. G. Harrold, Henry Helson, Israel N. Herstein, Eugene Isaacson, Joseph J. Kohn, Serge Lang, George Mackey, Saunders Mac Lane, H. P. McKean, Jr., W. T. Martin, A. P. Mattuck, Ernest A. Michael, C. B. Morrey, Jr., J. K. Moser, G. D. Mostow, Ivan Niven, R. S. Palais, Frank Peterson, Richard S. Pierce, Everett Pitcher, M. H. Protter, Irving Reiner, Gian-Carlo Rota, Stephen Smale, Jacob T. Schwartz, Dana S. Scott, George Seligman, Norman E. Steenrod, Michio Suzuki, P. Emery Thomas, W. R. Wasow, John Wermer, Bertram Yood, Oscar Zariski. W. R. Wasow, John Wermer, Bertram Yood, Oscar Zariski.

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. A department called Shorter Notes was established for the purpose of publishing very short papers of an unusually elegant and polished character, for which there is nor-

mally no other outlet.

Papers in algebra, number theory, and algebraic geometry should be sent to ARTHUR P. MATTUCK, Department of Mathematics, Massachusetts Institute of Technology, Cambridge, Massachusetts or IRVING REINER, Department of Mathematics, nology, Cambridge, Massachusetts or IRVING REINER, Department of Mathematics, University of Illinois, Urbana, Illinois; in modern or classical analysis to IRVING GLICKSBERG, Department of Mathematics, University of Washington, Seattle, Washington 98105 or to W. H. J. Fuchs, White Hall, Cornell University, Ithaca, New York 14850; in set-theoretic and general topology to Ernest A. Michael, Department of Mathematics, University of Washington, Seattle, Washington 98105; in algebraic topology and all other geometry to P. Emery Thomas, Department of Mathematics, University of California, Berkeley, California 94720; in applied mathematics, differential equations, and related areas of analysis to Wolfgang Wasow, Mathematics Department, University of Wisconsin, Madison, Wisconsin 53706; in probability, statistics, and related fields to Joshua Chover, Mathematics Department, University of Wisconsin, Madison, Wisconsin, Mad of Wisconsin, Madison, Wisconsin 53706; in logic, set theory, and related areas to W. W. Boone, Mathematics Department, University of Illinois, Urbana, Illinois 61801. All other communications should be addressed to the Managing Editor, ARTHUR MATTUCK.

Transactions of the American Mathematical Society

This journal is devoted entirely to research in pure and applied mathematics, and

ncludes in general longer papers than the Proceedings.
Papers in analysis and applied mathematics should be sent to J. J. Кони, Depart-Papers in analysis and applied mathematics should be sent to J. J. Kohn, Department of Mathematics, Brandeis University, Waltham, Massachusetts 02154; in topology to Franklin Peterson, Department of Mathematics, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139; in algebra, number theory, and logic to D. A. Buchsbaum, Department of Mathematics, Brandeis University, Waltham, Massachusetts 02154; in geometry and abstract analysis to R. S. Palais, Department of Mathematics, Brandeis University, Waltham, Massachusetts 02154; in statistics and probability to H. P. McKean, Department of Mathematics, Rockefeller University, New York, New York 10021; 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 fornia 94305. All other communications to the editors should be addressed to the Managing Editor, DANA SCOTT.

Journals Published by the American Mathematical Society

Soviet Mathematics-Doklady

SOVIET MATHEMATICS—DOKLADY is a translation journal containing the entire pure mathematics section of the DOKLADY AKADEMI NAUK SSSR, the Reports of the Academy of Sciences of the USSR. The DOKLADY for a year contains about 500 articles, each about 4 pages long. Issued bimonthly.

Mathematical Reviews

This journal is devoted to abstracts and reviews of the current mathematical literature of the world. Two volumes of MATHEMATICAL REVIEWS will be published in 1967, Volume 33, and Volume 34. 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.

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 the papers to be presented in 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.

Prospective publications should be addressed to the Editor, Professor Eugene Isaacson, Courant Institute of Mathematical Sciences, New York University, 251 Mercer Street, New York, New York 10012. The author may suggest the name of an editor for review of his paper.

Chinese Mathematics—Acta

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

New Publications

This quarterly journal announces new books and journals in all fields of higher mathematics, including a section on both forthcoming and recently published books. The information is acquired from several sources, such as pamphlets and catalogs received from publishers and book dealers from many parts of the world.

CONTENTS—Continued from back cover

a positive operator	702
Neil E. Gretsky. Representation theorems on Banach func-	102
tion spaces	705
R. R. Coifman. Remarks on weak type inequalities for	, ,
operators commuting with translations	710
A. T. Vasquez. On characteristic classes of flat Riemannian	
manifolds	715
Perrin Wright. A uniform generalized Schoenflies theorem	718
J. Sotomayor. Generic one-parameter families of vector fields	
on two-dimensional manifolds	722
Walter Rudin. Proof of a conjecture of Helson	727
Leopold Flatto. Basic sets of invariants for finite reflection	
group s	730
Joachim Weidmann. Strong Carleman operators are of	
Hilbert-Schmidt type	735
L. C. Siebenmann. On the homotopy type of compact topo-	
logical manifolds	738
A. L. S. Corner and Peter Crawley. An abelian p-group	
without the isomorphic refinement property	743
Michael Anshel and James R. Clay. Planarity in algebraic	
systems	746
David A. Freedman. On the derivative of a semigroup	749
Gilbert Baumslag. More groups that are just about free	752
David J. Winter. Solvable and nilpotent subalgebras of Lie	
algebras	754
Myung He Kwack. Generalization of the big Picard theorem.	759
Donald Curtis Taylor. A characterization of Banach algebras	
with approximate unit	761
Errata. Volumes 71, 72, 73 and 74	767

CONTENTS

July, 1968

The March Meeting in Los Angeles	631
Research Announcements	
H. E. Rauch. Functional independence of theta constants Jack T. Markin. A fixed point theorem for set valued	633
mappings Felix E. Browder and W. V. Petryshyn. The topological degree and Galerkin approximations for noncompact	639
operators in Banach spaces	641
Fred Gross. On the equation $f^n+g^n=1.II$ Fred Gross. Some theorems on factorization of meromorphic	647
functionsFelix E. Browder. Nonlinear eigenvalue problems and	649
Galerkin approximations	651
operator Felix E. Browder. Semicontractive and semiaccretive non-	657
linear mappings in Banach spaces	660
equations in the plane	666
spaces	671
Ian Richards. More on rings on rings	677
Israel Berstein. Involutions with nonzero Arf invariant Seymour Haber. A combination of Monte Carlo and classical	678
methods for evaluating multiple integrals	683
reduction principles in the analytical hierarchy Franz Kamber. On the characteristic homomorphism of a	687
discrete uniform subgroup of a nilpotent Lie group Murray Gerstenhaber. The obstruction to an automorphism	6 90
of a filtered ring Edwin J. Akutowicz. On mean-periodicity	695 698
Edwin J. Akutowicz. On mean-periodicity	070

Continued on inside back cover

GEORGE BANTA COMPANY, INC., MENASHA, WISCONSIN