

## 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 AKADEMIĬ NAUK SSSR, the Reports of the Academy of Sciences of the USSR. The DOKLADY for a year contains more than 500 articles, each about 4 pages long. Issued bimonthly in January, March, May, July, September, and November.

### 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 1966, Volume 31, and Volume 32. 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, University Computing Center, 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 published by Academia Sinica Peking, People's Republic of China. Acta Mathematica Sinica contains current research in all fields of pure mathematics.

Volume 1, 1962 of the translation (corresponding to Volume 10, 1960 of the original) contained three issues. Volume 2–6 (1963–1965) contain four issues each.

## 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, research problems and a department of research announcements.

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

Research Problems and Invited Addresses offered for publication should be sent to MURRAY GERSTENHABER, School of Mathematics, Institute for Advanced Study, Princeton, New Jersey 08540; Book Reviews to FELIX BROWDER, Department of Mathematics, University of Chicago, Chicago, Illinois 60637. Research Announcements offered for publication should be sent to some member of the Council of the Society, and communicated by him to E. H. SPANIER, Department of Mathematics, University of California, Berkeley, California 94720. All other communications to the editors should be sent to the Managing Editor, FELIX BROWDER.

The members of the Council for 1966 are: A. A. Albert, H. A. Antosiewicz, R. F. Arens, Maurice Auslander, Felix Browder, R. C. Buck, Eugenio Calabi, A. P. Calderon, Lamberto Cesari, P. J. Cohen, P. E. Conner, C. W. Curtis, J. B. Diaz, Eldon Dyer, Samuel Eilenberg, Walter Feit, Murray Gerstenhaber, J. W. Green, P. R. Halmos, O. G. Harrold, G. A. Hedlund, M. H. Heins, Henry Helson, Edwin Hewitt, Kenneth Hoffman, Eugene Isaacson, Fritz John, Mark Kac, V. L. Klee, Norman Levinson, M. M. Loeve, G. W. Mackey, W. T. Martin, A. P. Mattuck, J. W. Milnor, C. B. Morrey, G. D. Mostow, Louis Nirenberg, Ivan Niven, R. S. Palais, Frank Peterson, R. S. Pierce, Everett Pitcher, Irving Reiner, Alex Rosenberg, Dana Scott, Seymour Sherman, Stephen Smale, E. H. Spanier, N. E. Steenrod, Michio Suzuki, J. D. Swift, A. E. Taylor, John Wermer, Daniel Zelinsky, Antoni Zygmund.

### 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 normally no other outlet.

Papers in algebra and number theory should be sent to ARTHUR P. MATTUCK, Department of Mathematics, Massachusetts Institute of Technology, Cambridge, Massachusetts or IRVING REINER, Department of Mathematics, University of Illinois, Urbana, Illinois; in probability, real variables, logic, and foundations to R. C. BUCK, Department of Mathematics, University of Wisconsin, Madison, Wisconsin 53705; in abstract analysis to either R. C. BUCK, or FRITZ JOHN, Courant Institute of Mathematical Sciences, 4 Washington Place, New York, New York 10002; in geometry and topology to ELDON DYER, The City University of New York, Graduate Studies Division, 33 West 42nd Street, New York, New York 10036; in other branches of analysis, applied mathematics, and all other fields to W. H. J. FUCHS, Department of Mathematics, University of Illinois, Urbana, Illinois or FRITZ JOHN. All other communications to the editors should be addressed to the Managing Editor, R. C. BUCK.

### 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.

Papers in analysis and applied mathematics should be sent to LOUIS NIRENBERG, Courant Institute of Mathematical Sciences, New York University, New York, New York 10012; in topology to FRANK PETERSON, Department of Mathematics, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139; in algebra, number theory, and logic to DANIEL ZELINSKY, Department of Mathematics, Northwestern University, Evanston, Illinois; in geometry and abstract analysis to R. S. PALAIS, Department of Mathematics, Brandeis University, Waltham, Massachusetts; in statistics and probability to MICHEL LOEVE, Department of Statistics, University of California, Berkeley, California 94720; 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, LOUIS NIRENBERG.

**CONTENTS**—*Continued from back cover*

M. H. A. Newman. The engulfing theorem for locally tame sets.....	861
R. P. Boas, Jr. Fourier series with positive coefficients . . . . .	863
Arthur Wasserman. Cobordism of group actions . . . . .	866
Horst Leptin. On a certain invariant of a locally compact group.....	870
T. Petrie. The $K$ theory of the projective unitary groups . . . . .	875
Lawrence S. Husch. On regular neighborhoods of spheres . . . . .	879
Joel David Pincus. The spectral theory of self-adjoint Wiener-Hopf operators.....	882
Diederich Hinrichsen. Adapted integral representations by measures on Choquet boundaries.....	888
Ralph Tindell. A counterexample on relative regular neighborhoods. . . . .	892
D. W. L. Sumners. Higher-dimensional slice knots . . . . .	894
Robert M. Fossum. The Noetherian different of projective orders.....	898

# CONTENTS

September, 1966

## Gibbs Lecture

- D. H. Lehmer. Mechanized mathematics. . . . . 739

## Invited Addresses

- James Eells, Jr. A setting for global analysis. . . . . 751  
Richard Askey. Norm inequalities for some orthogonal series. . . . . 808  
The April Meeting in Hawaii. . . . . 824  
The June Meeting in Victoria. . . . . 825

## Research Announcements

- Siegfried Grosser and Martin Moskowitz. On central topological groups. . . . . 826  
Siegfried Grosser and Martin Moskowitz. Representation theory of central topological groups. . . . . 831  
F. Brock Fuller. The treatment of periodic orbits by the methods of fixed point theory. . . . . 838  
W. J. Schneider. An entire transcendental function whose inverse takes sets of finite measure into sets of finite measure 841  
E. F. Assmus, Jr. and H. F. Mattson, Jr. Disjoint Steiner systems associated with the Mathieu groups. . . . . 843  
F. W. Kamber and Ph. Tondeur. On flat bundles. . . . . 846  
Anthony W. Hager. On the maximal ring of quotients of  $C(X)$  850  
Lance W. Small. On some questions in Noetherian rings. . . 853  
L. A. Rubel and B. A. Taylor. A Fourier series method for meromorphic and entire functions. . . . . 858

*Continued on inside back cover*