# JOURNALS PUBLISHED BY THE AMERICAN MATHEMATICAL SOCIETY

Bulletin of the American Mathematical Society 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 has a department of research announcements. Invited addresses offered for publication should be sent to HANS F. WEINBERGER, Dept. of Mathematics, University of Minnesota, Minneapolis, MN 55455. Book reviews should be sent to PAUL R. HALMOS, Dept. of Mathematics, Indiana University, Bloomington, IN 47401. Research announcements are limited to 100 typed lines of 65 characters each. They are intended to communicate outstanding results that are to be reported in full elsewhere. Research announcements should be sent directly to a member of the Council of the American Mathematical Society who is also a member of an editorial committee of the Society. The names of these Council members are on the inside back cover. All other correspondence about research announcements should be sent to JOHN L. KELLEY, Dept. of Mathematics, University of California, Berkeley, CA 94720.

The first page of each article, including research announcements, that is submitted for publication should bear a descriptive title which whould be short, but informative. Useless or vague phrases such as "some remarks about" or "concerning" should be avoided. Before the first footnote, there should be the AMS (MOS) subject classification numbers representing the primary and secondary subjects of the article. If a list of key words and phrases describing the subject matter of the article is included, it will also be printed as a footnote on the first page. The AMS (MOS) Subject Classification Scheme (1970) with instructions for its use can be found as an appendix to MATHEMATICAL REVIEWS, index to volume 39 (1970). See the June 1970 NOTICES for more details, as well as illustrative examples.

When a paper with more than one author has been accepted for publication, only one set of galley proof will be sent. Joint authors should, therefore, indicate on the original manuscript which of them should receive galley proof in the event that the manuscript is accepted for publication.

BACKLOG. NONE. 90% of the papers currently being communicated by the editors will be published in 3-4 months.

Proceedings of the American Mathematical Society is a monthly journal devoted entirely to research in pure and applied mathematics, 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 algebraic and differential topology should be sent to GLEN E. BREDON, Dept. of Mathematics, Rutgers University, New Brunswick, NJ 08903; in combinatorics and discrete mathematics to JAY R. GOLDMAN, School of Mathematics, University of Minnesota, Minneapolis, MN 55455; in commutative algebra to ROBERT M. FOSSUM, Dept. of Mathematics, University of Illinois, Urbana, IL 61801; in complex variables and analytic number theory to Louis Brickman, Dept. of Mathematics, State University of New York at Albany, Albany, NY 12203 or to PETER L. DUREN, Dept. of Mathematics, University of Michigan, Ann Arbor, MI 48104; in differential equations to RICHARD K. MILLER, Dept. of Mathematics, Iowa State University, Ames, IA 50010; in functional analysis and operator theory to CHANDLER DAVIS, Dept. of Mathematics, University of Toronto, Toronto, M5 SA1, Ontario, Canada or to RONALD G. DOUGLAS, Dept. of Mathematics, State University of New York at Stony Brook, Stony Brook, NY 11790 or to PETER A. FILLMORE, Dept. of Mathematics, Indiana University, Bloomington, IN 47401; in general algebra to BARBARA L. OSOFSKY, Dept. of Mathematics, Rutgers University, New Brunswick, NJ 08903; in general analysis to RICHARD R. GOLDBERG, Dept. of Mathematics, University of Iowa, Iowa City, IA 52240; in general topology to W. WISTAR COMFORT, Dept. of Mathematics, Wesleyan University, Middletown, CT 06457 or to Thomas A. Chapman, Dept. of Mathematics, University of Kentucky, Lexington, KY 40506; in geometry to JOSEPH A. WOLF, Dept. of Mathematics, University of California, Berkeley, CA 94720; in group theory to NORMAN BLACKBURN, Dept. of Mathematics, University of Illinois at Chicago Circle, Chicago, IL 60680; in logic and foundations to K. Jon Barwise, Dept. of Mathematics, University of Wisconsin, Madison, WI 53706; in probability and other fields to JAMES D. KUELBS, Dept. of Mathematics, University of Wisconsin, Madison, WI 53706; in real variables to RICHARD A. HUNT, Division of Mathematical Sciences, Purdue University, Lafayette, IN 47907. All other communications should be addressed to the Managing Editor W. WISTAR COMFORT at the above address.

Mathematics of Computation is a quarterly 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, reviews and notes in these and related fields are published. Prospec-

Mathematical Reviews is a monthly journal devoted to abstracts and reviews of the current mathematical literature of the world. Each volume consists of six regular issues plus an index issue. Abstracts and reviews are grouped under subject headings.

Transactions of the American Mathematical Society is a monthly journal devoted entirely to research in pure and applied mathematics and, in general, includes longer papers than those in the PROCEEDINGS. Papers in real analysis (excluding harmonic analysis) and applied mathematics should be sent to François Treves, Dept. of Mathematics, Rutgers University, New Brunswick, NJ 08903; in harmonic and complex analysis to Hugo Rossi, Dept. of Mathematics, University of Utah, Salt Lake City, UT 84112; in abstract analysis to ALEXANDRA IONESCU TULCEA, Dept. of Mathematics, Northwestern University, Evanston, IL 60201; in algebra and number theory (excluding universal algebras) to STEPHEN S. SHATZ, Dept. of Mathematics, University of Pennsylvania Philadelphia, PA 19174; in logic, foundations, universal algebras and combinatorics to ALISTAIR H. LACHLAN, Dept. of Mathematics, Simon Fraser University, Burnaby 2, B.C., Canada; in topology to PHILIP T. CHURCH, Dept. of Mathematics, Syracuse University, Syracuse, NY 13210; in global analysis and differential geometry to VICTOR W. GUILLEMIN, c/o Mrs. M. McQuillin, Dept. of Mathematics, Harvard University, Cambridge, MA 02138; in probability and statistics to DANIEL W. STROOCK, Dept. of Mathematics, University of Colorado, Boulder, CO 80302. All other communications to the editors should be addressed to the Managing Editor, A. H. LACHLAN at the above address.

Memoirs of the American Mathematical Society is a bimonthly journal constituting a series of paperbound research tracts which are of the same general character as the papers published in the TRANSACTIONS. An issue of the MEMOIRS is made up of one or more numbers; a number contains either a single monograph or a group of cognate papers. Copy is supplied by the author; information on preparation of camera copy may be obtained by writing to the Editorial Department of the American Mathematical Society. Papers should be sent to the appropriate editor of TRANSACTIONS.

Notices of the American Mathematical Society, published eight times a year, announces the programs of the meetings of the Society. The NOTICES 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, American Mathematical Society, P.O. Box 6248, Providence, RI 02940. 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 that issue. These deadlines are published regularly on the inside front cover.

Current Mathematical Publications, issued biweekly, contains a subject-classified index of papers and books being published currently in mathematics.

#### TRANSLATION JOURNALS

Soviet Mathematics—Doklady is a bimonthly translation journal containing the entire pure mathematics section of the DOKLADY AKADEMII NAUK SSSR, the Reports of the Academy of Sciences in the USSR. DOKLADY publishes 500 articles a year, each about four pages long.

Mathematics of the USSR—Izvestija, a bimonthly journal, is a cover-to-cover translation of IZVESTIJA AKADEMIĬ NAUK SSSR SERIJA MATEMATIČESKAJA, published by the Academy of Sciences of the USSR. This is a journal of current research in all fields of pure mathematics.

Mathematics of the USSR—Sbornik is a monthly journal and is a cover-to-cover translation of MATEMATIČESKIĬ SBORNIK (NOVAJA SERIJA), published by the Moscow Mathematical Society and the Academy of Sciences of the USSR. This is a journal of current research in all fields of pure mathematics.

Theory of Probability and Mathematical Statistics is the cover-to-cover translation into English of the Teorija Verojatnosteĭ i Matematičeskaja Statistika published by Kiev University, beginning with the 1970 Soviet publication.

Vestnik of the Leningrad University (Mathematics) is the complete translation into English of the mathematics section of the VESTNIK LENINGRADSKOGO UNIVERSITETA, beginning with the Soviet publication of 1968. All fields of mathematics are covered.

Karel Prikry. Ideals and powers of cardinals
Allan J. Silberger. Convexity for a simply connected p-adic group
C. M. Newman. An extension of Khintchine's inequality
Thomas Zaslavsky. Counting the faces of cut-up spaces
David A. Edwards and Ross Geoghegan. The Wall obstruction in shape and pro-
homotopy, with applications
Jacob Feldman and Calvin C. Moore. Ergodic equivalence relations, cohomology, and von Neumann algebras
Richard S. Ellis. Concavity of magnetization for a class of even ferromagnets
Michiel Hazewinkel. A universal formal group and complex cobordism
Wilberd van der Kallen, Hendrik Maazen and Jan Stienstra. A presentation for some $K_2(n, R)$
B. Kostant and D. Sullivan. The Euler characteristic of an affine space form is
zero
Richard B. Melrose. Normal self-intersections of the characteristic variety
A. Cordoba and R. Fefferman. A geometric proof of the strong maximal theorem
A. G. Earnest and J. S. Hsia. Springer-type theorems for spinor genera of quadra-
tic forms
Beth Goldston and A. C. Mewborn. A structure sheaf for a noncommutative Noetherian ring
Jacques Lewin and Tekla Lewin. The group algebra of a torsion-free one-relator
group can be embedded in a field
Alberto Torchinsky. On a mean value inequality
William F. Trench. Proof of a conjecture of Askey on orthogonal expansions with positive coefficients
•
William A. R. Weiss. A solution to the Blumberg problem
Robert J. Zimmer. Distal transformation groups and fibre bundles

## COUNCIL, 1975

# **PUBLICATIONS COMMITTEES\***

Robert G. Bartle, Hyman Bass, James H. Bramble, Glen E. Bredon, Edgar H. Brown, Jr., Alberto P. Calderón, S. S. Chern, Philip T. Church, W. Wistar Comfort, Chandler Davis, Samuel Eilenberg, Robert M. Fossum, Walter Gautschi, Richard R. Goldberg, Paul R. Halmos, Alston S. Householder, Alexandra Ionescu-Tulcea, John L. Kelley, Alistair H. Lachlan, D. J. Lewis, Richard K. Miller, Barbara L. Osofsky, Jacob T. Schwartz, Stephen S. Shatz, I. M. Singer, Daniel W. Stroock, François Treves, Hans F. Weinberger, John W. Wrench, Jr.

#### OTHER MEMBERS OF THE COUNCIL

Paul Bateman, Anatole Beck, Lipman Bers, Raoul H. Bott, Charles W. Curtis, David Gale, Leonard Gillman, Michael Golomb, Walter Gottschalk, Mary W. Gray, Judy Green, Phillip A. Griffiths, Orville G. Harrold, Jr., Irving Kaplansky, Herbert B. Keller, Robion C. Kirby, Lee Lorch, Saunders Mac Lane, Arthur P. Mattuck, John W. Milnor, Cathleen S. Morawetz, Karl K. Norton, Franklin Peterson, Everett Pitcher, Murray H. Protter, Kenneth A. Ross, Jane Cronin Scanlon, J. Ernest Wilkins, Jr.

<sup>\*</sup> Research announcements, limited to 100 typed lines of 65 spaces each, may be submitted to those members of the Council who are members of the publications committees. Such announcements are intended to communicate outstanding results that are to be reported in full elsewhere.

## CONTENTS

# September, 1975

Haskell P. Rosenthal. The Banach spaces $C(K)$ and $L^p(\mu)$
S. I. Rubinow. Some mathematical problems in biology
C. E. Burgess. Embeddings of surfaces in Euclidean three-space
The May Council meeting in DeKalb
The October meeting in New York
The Annual meeting in Washington, D. C
Elections to membership
Report to the Treasurer
Victor Goodman. Review of "Stochastic differential equations; theory and applications" by L. Arnold, and "Stochastic differential systems, I. Filtering and control, a function space approach" by A. V. Balakrishnan
W. H. Fleming. Review of "Optimal control theory" by L. D. Berkovitz
R. G. Douglas. Review of "Einige Klassen singularen Gleichungen" by S. Prössdorf Charles A. Akemann. Review of "Lectures in functional analysis and operator
theory" by Sterling K. Berberian, "Functional analysis, a short course" by
Edward W. Packel, and "Functional analysis" by Walter Rudin
J. F. C. Kingman. Review of "Random sets and integral geometry" by G.
MatheronAdam Korányi. Review of "Monotone matrix functions and analytic continua-
tion" by W. F. Donoghue, Jr
K. W. Gruenberg. Review of "Homology in group theory" by Urs Stammbach
Menachem Magidor. Review of "Aspects of constructibility" by Keith J. Devlin
Charles B. Morrey, Jr. Review of "Analyse convexe et problèmes variationelles"
by I. Ekeland and R. Teman
E. H. Spanier. Review of "Characteristic classes" by John W. Milnor and James D. Stasheff
A. W. Knapp. Review of "Lie groups, Lie algebras, and their representations" by  V. S. Varadarajan, and "Compact Lie groups and their representations" by  D. P. Želobenko
Harold Levine. Review of "Analyse differentielle" by Valentin Poenaru, and
"Stable mappings and their singularities" by M. Golubitsky and V. Guillemin
John L. Challifour. Review of "The $P(\Phi)_2$ euclidean (quantum) field theory" by
Barry Simon
Earl Glen Whitehead, Jr. Review of "La série génératrice exponentielle dans les
problèmes d'énumération" by Dominique Foata
David H. Sattinger. Review of "Theory of branching of solutions of non-linear
equations" by M. M. Vainberg and V. A. Trenogin
Ronald E. Bruck, Jr. An iterative solution of a variational inequality for certain
monotone operators in Hilbert space
Erik M. Alfsen and Frederic W. Shultz. On the geometry of noncommutative
spectral theory
James E. Daly. The invalidity of the Calderón-Zygmund inequality for singular
integrals over local fields
George R. Kempf. Images of homogeneous vector bundles and varieties of complexes
Tomio Kubota. A generalized Weil type representation and a function analogous to $e^{-x^2}$
Jorge Mujica. On the Nachbin topology in spaces of holomorphic functions