JOURNALS PUBLISHED BY THE AMERICAN MATHEMATICAL SOCIETY

TRANSLATION JOURNALS

Soviet Mathematics–Doklady is a bimonthly translation journal containing the entire pure mathematics section of the DOKLADY AKADEMII NAUK SSSR.

Mathematics of the USSR–Izvestiya, a bimonthly journal, is a cover-to-cover translation of IZVESTIYA AKADEMII NAUK SSSR SERIYA MATEMATICHESKAYA.

Mathematics of the USSR–Sbornik is a bimonthly journal and is a cover-to-cover translation of MATEMATICHESKIĬ SBORNIK (NOVAYA SERIYA).

Theory of Probability and Mathematical Statistics is the cover-to-cover translation into English of the TEORIYA VEROYATNOSTEĬ I MATEMATICHESKAYA STATISTIKA.

Vestnik of the Leningrad University (Mathematics) is the complete translation into English of the mathematics section of the VESTNIK LENINGRADSKOGO UNIVERSITETA.

Transactions of the Moscow Mathematical Society is a translation into English of TRUDY MOSKOVSKOGO MATEMATICHESKOGO OBSHCHESTVA.

Proceedings of the Steklov Institute of Mathematics is a translation of AKADEMIYA NAUK SSSR TRUDY ORDENA LENINA MATEMATICHESKOGO INSTITUTA IMENI V. A. STEKLOVA.

RESEARCH JOURNALS

Submission information for these journals is included in the April and October issues of this BULLETIN.

Bulletin (New Series) of the American Mathematical Society is a quarterly journal which contains Research-Expository Papers, Research Announcements and Reviews of Books on Advanced Mathematics.

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.

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.

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.

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.

OTHER JOURNALS

Abstracts of Papers Presented to the American Mathematical Society contains abstracts of invited hour addresses, of papers presented in special sessions or in sessions for contributed papers, and of papers presented to the Society "by title".

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

Mathematical Reviews is a monthly journal devoted to abstracts and reviews of the current mathematical literature of the world. Abstracts and reviews are grouped according to the 1980 Mathematics Subject Classification scheme. The subscription includes an annual author and subject index.

Notices of the American Mathematical Society, published seven times a year, contains programs and reports of the meetings of the Society, reports on Society business, communications to the membership, and news items and information of interest to the mathematical community.

BULLETIN (New Series) of the American Mathematical Society

EDITORS

EDITORIAL BOARD FOR RESEARCH-EXPOSITORY ARTICLES

Hyman Bass
Chairman
Felix Browder
Benedict Gross
Morris W. Hirsch
Victor Kac
Irving Kaplansky
John W. Milnor
Wilfried Schmid
Guido L. Weiss

EDITORIAL BOARD FOR RESEARCH ANNOUNCEMENTS

Spencer Bloch
Ronald L. Graham
Roger Howe
Wu-chung Hsiang
H. Blaine Lawson, Jr.
Richard Melrose
Calvin C. Moore
Chairman
Yiannis Moschovakis
Harold M. Stark

BOOK REVIEW EDITOR: Meyer Jerison

MANAGING EDITOR: Hyman Bass

MANUSCRIPT, PROOF AND COPYING INFORMATION

MANUSCRIPT

Articles submitted for publication should be typewritten and double spaced. The *Manual for Authors*, available from the Society, should be consulted for symbols and style conventions. Authors should take the greatest possible care in preparing the original manuscript. Hand drawn symbols are satisfactory if clearly done; directions to the printer should be included where necessary on a separate sheet.

For Research-Expository Articles and Research Announcements, the first footnote should include *subject classification numbers* representing the primary and secondary subjects of the article. The 1980 Mathematics Subject Classification can be found in the December index volumes of Mathematical Reviews.

GALLEY PROOF

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 which of them should receive galley proof in the event that the manuscript is accepted for publication.

COPYING AND REPRINTING

Individual readers of this publication, and nonprofit libraries acting for them are permitted to make fair use of the material, such as to copy an article for use in teaching or research. Permission is granted to quote brief passages from this publication in reviews provided the customary acknowledgement of the source is given.

Republication, systematic copying, or multiple reproduction of any material in this publication (including abstracts) is permitted only under license from the American Mathematical Society. Requests for such permission should be addressed to the Executive Director, American Mathematical Society, P.O. Box 6248, Providence, Rhode Island 02940.

The appearance of the code on the first page of an article in this journal indicates the copyright owner's consent for copying beyond that permitted by Sections 107 or 108 of the U.S. Copyright Law, provided that the fee of $1.00 plus $.25 per page for

each copy be paid directly to Copyright Clearance Center, Inc. 21, Congress Street, Salem, Massachusetts 01970. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotion purposes, for creating new collective works or for resale.

OFFPRINTS AND ADDRESS CHANGES

Any inquiries concerning a paper which has been accepted for publication, including information regarding reprints or changes of address for mailing proof, should be sent directly to the Editorial Department, American Mathematical Society, P.O. Box 6248, Providence, Rhode Island 02940.

COPYRIGHT TRANSFER AGREEMENT

The signing of a Copyright Transfer Agreement is a requirement of publication in the BULLETIN. A copy of the agreement is sent to the authors upon receipt of a manuscript in the Providence Office of the Society; in case of joint authors, copies are sent to the author who is designated to receive galley proof. Authors are urged to return the form immediately to prevent delays in processing and publishing the manuscript. The 1984 edition of the *Manual for Authors* has a description of Society policy concerning copyright and a copy of the agreement.

PUBLICATION CHARGES

Research Announcements carry a page charge of $50.00 per page to help defray the cost of publication. This amount is charged to the institution or to a contract supporting the research reported in the published paper. The publication charge policy of the United States Federal Council for Science and Technology (FCST) is reported on page 112 of the February, 1975 issue of the NOTICES of the American Mathematical Society. In no case is the author personally responsible for paying the page charge, nor is acceptance of the author's paper for publication dependent upon payment of the page charge.

ABCDEFGHIJ–CM–898765

Research — Expository Papers

Amalgams of L^p and l^q *by John J. F. Fournier and James Stewart* 1

Gauss' class number problem for imaginary quadratic fields *by Dorian Goldfeld* 23

Research Announcements

Unitary dual of p-adic $GL(n)$. Proof of Bernstein conjectures *by Marko Tadić* 39

Dehn surgery on knots *by Mark C. Culler; C. McA. Gordon; J. Luecke and Peter B. Shalen* 43

Irreducible representations of infinite-dimensional transformation groups and Lie algebras *by Paul R. Chernoff* 46

Homotopy groups of the complements to singular hypersurfaces *by A. Libgober* 49

Book Reviews

Sequences and series in Banach spaces *by Joseph Diestel*—**Reviewed by** *Yoav Benyamini* 53

Random fields: analysis and synthesis *by Erik Vanmarcke*; **Spectral theory of random fields** *by M. I. Yadrenko*—**Reviewed by** *Simeon M. Berman* 57

Modern geometry (Sovremennaya geometriya) *by B. A. Dubrovin; S. P. Novikov and A. T. Fomenko*—**Reviewed by** *Melvyn S. Berger* 62

Extreme and related properties of random sequences and processes *by M. R. Leadbetter; Georg Lindgren and Holger Rootzen*—**Reviewed by** *Janos Galambos* 65

Unified integration *by E. J. McShane*—**Reviewed by** *Elias Saab* 68

Group representations and special functions *by Antoni Wawrzyńczyk*—**Reviewed by** *Willard Miller, Jr.* 70

The umbral calculus *by Steven Roman*—**Reviewed by** *Doron Zeilberger* 73

Theory of function spaces *by Hans Triebel*—**Reviewed by** *Raymond Johnson* 76

Probabilistic and statistical aspects of quantum theory *by A. S. Holevo*—**Reviewed by** *S. P. Gudder* 80