# BULLETIN (New Series) of the American Mathematical Society

#### EDITORIAL BOARD FOR RESEARCH-EXPOSITORY ARTICLES

Lipman Bers Frederick W. Gehring
Felix E. Browder, Donald S. Ornstein
Chairman James B. Serrin
Paul J. Cohen Stephen Smale
Morton L. Curtis John T. Tate

#### EDITORIAL BOARD FOR RESEARCH ANNOUNCEMENTS

Irving Kaplansky
Robert P. Langlands
Richard K. Lashof
Hugh P. McKean, Jr.
Hugh L. Montgomery

Cathleen S. Morawetz
David Mumford
Gian-Carlo Rota
I. M. Singer, Chairman
Elias M. Stein

MANAGING EDITOR

Felix E. Browder

# MANUSCRIPT, PROOF AND COPYING INFORMATION

# SUBMISSION OF 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.

#### 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 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 of the manuscript. The 1978 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 \$40.00 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.

## REPRINTS 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.

#### **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, 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 copier pay the stated per copy fee through the Copyright Clearance Center, Inc. (For details write CCC Operations Staff, P.O. Box 765, Schenectady, New York 12301).

RESEARCH - EXPOSITORY PAPERS	
Complex analysis and algebraic geometry by Phillip A. Griffiths	595
BOOK REVIEWS	
Anti-invariant submanifolds by Kentaro Yano and Masahiro Kon –  Reviewed by Robert C. Reilly	627
Degree theory by N. G. Lloyd - Reviewed by Roger D. Nussbaum	632
The Minkowski multidimensional problem by Aleksey Vasil'yevich Pogorelov Reviewed by Eugenio Calabi	636
Acceleration de la convergence en analyse numérique by C. Brezinski — Reviewed by Peter Henrici	639
Infinite loop spaces by J. F. Adams - Reviewed by J. P. May	642
Hilbert's third problem by Vladimir G. Boltianskii — Reviewed by Ross A.  Honsberger	646
Mechanizing hypothesis formation. Mathematical foundations for a general theory by P. Hájek and T. Havrdnek — Reviewed by I. J. Good	650
Topics in group rings by Sudarshan K. Sehgal — Reviewed by W. H.  Gustafson	654
K-theory, and introduction by Max Karoubi - Reviewed by Robert E. Stona	658
Modern methods in partial differential equations, an introduction by Martin Schechter Reviewed by Michael E. Taylor	661
Information and exponential families in statistical theory by O. Barndorff- Nielsen Reviewed by T. S. Pitcher	667
The collected works of Harold Davenport edited by B. J. Birch, H. Halber- stam and C. A. Rogers Reviewed by Emil Grosswald	668
Automata-theoretic aspects of formal power series by Arto Salomaa and Matti Soittola Reviewed by Gerard Lallement	675
Panorama des mathématiques pures. Le choix bourbachique by Jean	0/3
Dieudonné Reviewed by P. R. Halmos	678
ERRATA, VOLUME 84	681
RESEARCH ANNOUNCEMENTS	
The restricted simple Lie algebras with a two-dimensional Cartan subalgebra by Richard E. Block and Robert Lee Wilson	682
Linear algebra and topology by Sylvain E. Cappell and Julius L. Shaneson	685
The L <sup>2</sup> -index theorem for homogeneous spaces by Alain Connes and Henri Moscovici	688
Division algebras of degree 4 and 8 with involution by S. A. Amitsur, L. H. Rowen and J. P. Tignol	691
On conjectures of Rivière and Strichartz by Carlos E. Kenig and Peter A.  Tomas	694
On the complete integrability of nonlinear partial differential equations by  M. S. Regger and P. T. Church	698