
VOLUME 36 NUMBER 3



JULY 1999

BULLETIN

(NEW SERIES)

OF THE

AMERICAN MATHEMATICAL SOCIETY

EDITORS

Research-Expository Surveys
Research Reports

Donald G. Saari
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Book Reviews

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PROVIDENCE, RHODE ISLAND USA

ISSN 0273-0979

Available electronically at
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Bulletin (New Series) of the American Mathematical Society

This journal is devoted to articles of the following types:

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These are, by definition, papers that present a clear and insightful exposition of significant aspects of contemporary mathematical research. Gibbs lectures, Progress in Mathematics lectures, and retiring presidential addresses will be included in this section.

Research Reports

These are brief, timely reports on important mathematical developments. They are normally solicited and often written by a disinterested expert.

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Subscription information. *Bulletin (New Series) of the American Mathematical Society* is published quarterly. The *Bulletin* is also accessible electronically, starting with the January 1992 issue, from e-MATH via the World Wide Web at the URL <http://www.ams.org/publications/>. For paper delivery, subscription prices for Volume 36 (1999) are \$288 list, \$230 institutional member, \$173 individual member. The subscription price for members is included in the annual dues. A late charge of 10% of the subscription price will be imposed upon orders received from nonmembers after January 1 of the subscription year. Subscribers outside the United States and India must pay a postage surcharge of \$8.00; subscribers in India must pay a postage surcharge of \$13.00. Expedited delivery to destinations in North America is \$12; elsewhere \$23.

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Bulletin (New Series) of the American Mathematical Society is published quarterly by the American Mathematical Society at 201 Charles Street, Providence, RI 02904-2213. Periodicals postage is paid at Providence, Rhode Island, and additional mailing offices. Postmaster: Send address changes to Bulletin, American Mathematical Society, P.O. Box 6248, Providence, RI 02940-6248.

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For Research-Expository Surveys and Research Reports, the first page must consist of a *descriptive title*, followed by an *abstract* that summarizes the article in language suitable for workers in the general field (algebra, analysis, etc.). The *descriptive title* should be short but informative; useless or vague phrases such as “some remarks about” or “concerning” should be avoided. The *abstract* should be a brief technical description of the new material. Then, for Research Reports

there should be an introductory section addressed to nonexperts describing the motivation, background, and significance of the results announced. Following the statement of results, there should be a sketch of proofs that may be addressed to experts. Included with the footnotes in each paper, there should be the 1991 *Mathematics Subject Classification* representing the primary and secondary subjects of the article. This may be followed by a list of *key words and phrases* describing the subject matter of the article and taken from it. A list of classifications may be found in the annual index of *Mathematical Reviews*, published with the December issue starting in 1990. Journal abbreviations used in bibliographies are also listed in the latest *Mathematical Reviews* annual index. The classifications and the journal abbreviations are accessible from e-MATH via the World Wide Web through the URL <http://www.ams.org/publications/>. When the manuscript is submitted, authors should supply the editor with electronic addresses if available. These will be printed after the postal address at the end of each article.

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Any inquiries concerning a paper that has been accepted for publication should be sent directly to the Electronic Prepress Department, American Mathematical Society, P. O. Box 6248, Providence, RI 02940-6248.

Research-Expository Surveys

This section is intended for reasonably broad expository surveys of a currently active area of mathematical research. To stress this fact, the name of the section has been changed from “Research-Expository Papers” to “Research-Expository Surveys”. The level of exposition is expected to be such that a graduate student—or a research mathematician from a remote area—will be able to read an article in order to get an overview of a subject. A well-written article will include motivating problems and examples, some indication of the historical development of the subject, and of course the results and open problems that make it an interesting and exciting area of mathematics. In most cases proofs should be at most briefly sketched, and there should be a good bibliography whose main aim should be helping those wishing to pursue the subject further. Usually Research-Expository Surveys will be at most 40 pages long.

Certain of the Society’s Lecture Series, including the Gibbs Lectures, Colloquium Lectures, and Progress in Mathematics Lectures, traditionally appear in the Research-Expository Surveys, and those invited to give these lectures are informed of this tradition and of the above guidelines. Research-Expository Surveys are also frequently solicited by the Editorial Board, but unsolicited manuscripts are also encouraged; in particular, those invited to give invited hour addresses at meetings of the Society should consider writing up their lecture in a manner that meets the requirements of the preceding paragraph and submitting their manuscripts for consideration by the Editorial Board for the Research-Expository Surveys.

Research Reports

A Research Report is a timely, short (4–8 pages) report on a recent accomplishment in mathematical research. It should be written so as to be understandable by mathematicians who are not experts in the subject matter of the Report. The context giving significance to the research being reported on should be made clear, and the consequences or potential consequences should be described. Usually only the barest hint of the methods of proof should be given, although elements of the proof which are novel should be included. In any case, references should be given so that an interested reader can find the details. It is expected that Research Reports will frequently be written by specialists other than the individuals immediately involved in the research.

Research Reports are normally solicited by the Editor for Research Reports and the Board of Associate Editors. They cordially invite suggestions for topics and reporters. Unsolicited manuscripts, submitted to the Editor for Research Reports, will also be considered.

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