

**ILLINOIS
JOURNAL
OF
MATHEMATICS**

.....

a quarterly journal published by the
UNIVERSITY OF ILLINOIS, URBANA

.....

edited by

ROBERT G. BARTLE

A. P. CALDERÓN

MAHLON M. DAY

PETER HILTON

HANS SAMELSON

MICHIO SUZUKI

ILLINOIS JOURNAL OF MATHEMATICS

Manuscripts

Original research papers in pure and applied mathematics intended for publication in this journal may be written in English, French, German, or Italian. They should be addressed to the Illinois Journal of Mathematics, University of Illinois, Urbana, Illinois 61801, or to one of the editors:

ROBERT G. BARTLE, Department of Mathematics, University of Illinois, Urbana, Illinois 61801.

A. P. CALDERÓN, Department of Mathematics, The University of Chicago, Chicago, Illinois 60637.

MAHLON M. DAY, Department of Mathematics, University of Illinois, Urbana, Illinois 61801.

PETER HILTON, Department of Mathematics, Cornell University, Ithaca, New York 14850.

HANS SAMELSON, Department of Mathematics, Stanford University, Stanford, California 94305.

MICHIO SUZUKI, Department of Mathematics, University of Illinois, Urbana, Illinois 61801.

All papers should be typewritten, double spaced, and the author should keep a complete copy. Bibliography and footnotes should be typed, double spaced, on separate sheets of paper. Figures should be drawn separately in black ink on white paper suitable for being photographed and reduced (lettering included) to half size.

Proof

Authors will receive only galley proof. Proof sent to North American addresses will be accompanied by manuscript and sent by first class mail. To other addresses, proof will be sent by airmail, and manuscript will be sent only if requested. Authors are asked to return proof (and manuscript if sent) by the same class of mail that was used in sending it to them.

Reprints

One hundred free reprints are supplied to the sole author of a paper; fifty free reprints are supplied to each author of a joint paper. Additional reprints may be purchased from Waverly Press.

The ILLINOIS JOURNAL OF MATHEMATICS is published quarterly by the University of Illinois. Entered as second-class matter June 4, 1957 at the post office at Urbana, Illinois, under the act of August 24, 1912. Office of publication, University of Illinois Press, Urbana Ill.

Copyright © 1968, Board of Trustees, University of Illinois

Made in U. S. A.