

**NAGOYA
MATHEMATICAL JOURNAL**

VOL. 66

May 1977

**PUBLISHED BY
DEPARTMENT OF MATHEMATICS, FACULTY OF SCIENCE
NAGOYA UNIVERSITY**

Correspondences concerning subscription, and back issues
of the journal should be addressed to

KINOKUNIYA BOOK-STORE CO., LTD.
17-7 Shinjuku 3-chome, Shinjuku-ku
TOKYO 160-91 JAPAN

or

KINOKUNIYA BOOK STORES
OF AMERICA CO., LTD.
West Bldg., Japanese Cultural and
Trade Center
1581 Webster St.,
San Francisco, CALIFORNIA 94115,
U.S.A.

The annual subscription price for 1976 is about \$ 93.60

NAGOYA
MATHEMATICAL JOURNAL

VOL. 66

May 1977

Edited by

TAKEYUKI HIDA, NOBORU ITO, TOMIO KUBOTA (Managing Editor),
HIDEYUKI MATSUMURA, HISASI MORIKAWA, AKIHIKO MORIMOTO,
KATUJI ONO, YOSHIHIRO SHIKATA, KÔSAKU YOSIDA

PUBLISHED BY
DEPARTMENT OF MATHEMATICS, FACULTY OF SCIENCE
NAGOYA UNIVERSITY

Nagoya Mathematical Journal is, in principle, the official organ of the Department of Mathematics, Nagoya University, designed solely for the publication of research papers. However, some invited papers and other original papers in mathematics from all over the world are also regularly published in Nagoya Mathematical Journal. Currently, 4 volumes are published each year.

All manuscripts should be typewritten in English, French, or German with sufficient space between lines, and special letters such as bold-face, German, Greek, and script should be clearly marked. All single letters used in formulas will appear in italic, and mathematical symbols will appear in the standard style usual for mathematical literature. Therefore, it is not required to mark such letters and symbols. Instructions which conflict with the general printing rules of the journal will not be accepted. For example, each paragraph title should appear in bold-face. Good reproductions of a typewritten manuscript are acceptable.

As soon as we receive a manuscript, a receipt will be sent to the author. When a manuscript has been sent to a referee, the author will receive another notice. These receipts and notices, however, do not mean anything regarding the acceptability of the paper for publication. If the editorial committee has decided to accept a paper, the author will receive a notice containing the number of the volume in which the paper will appear.

Each author, as well as each co-author, will have 100 reprints, while only one set of proof will be prepared per paper for proof-reading by the author(s). Therefore, a joint paper must carry instructions as to whom the proof should be sent. Attached to the proof, an order form will be sent to the author for the additional reprints which are available at approximately 3¢ per page.

The actual business of the Nagoya Mathematical Journal is performed by the managing editor with the cooperation of editors residing in Nagoya.

The manuscript and general correspondence should be addressed to: Managing editor, Nagoya Mathematical Journal, Department of Mathematics, Faculty of Science, Nagoya University, Chikusa-ku, Nagoya, 464, Japan.

CONTENTS

Hypoellipticity for a class of the second order partial differential equations	T. MATSUZAWA	1
Another approach to a non-elliptic boundary problem.....	..... Y. KATO	13
Construction of a solution of a certain evolution equation ....	..... A. SHIMIZU	23
Sur quelques combinaisons linéaires exceptionnelles au sens de Nevanlinna, V. ....	..... N. TODA	37
Sur les noyaux de convolution conditionnellement sous-medians .....	..... M. ITÔ	53
Ample vector bundles on a rational surface (higher rank) ....	..... T. HOSOH	77
Class numbers of quadratic forms over real quadratic fields ..	..... Y. KITAOKA	89
Elliptic curves with a torsion point.....	T. HADANO	99
On certain examples of surfaces with $p_g = 0$...	C. A. M. PETERS	109
Curves in Grassmann varieties	A. PAPANTONOPOULOU	121
Scalar extension of quadratic lattices.....	Y. KITAOKA	139
Boundedness and convergence of solutions of Duffing's equation .....	..... K. SHIRAIWA	151
Note on class number factors and prime decompositions.....	..... Y. FURUTA	167
On Shimura's trace formula	S. NIWA	183