

ISSN 0027-7630

NAGOYA
MATHEMATICAL JOURNAL

VOL. 99

September 1985

PUBLISHED BY
DEPARTMENT OF MATHEMATICS, FACULTY OF SCIENCE
NAGOYA UNIVERSITY

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

KINOKUNIYA COMPANY LTD.
17-7 Shinjuku 3-chome, Shinjuku-ku
Tokyo 160-91 JAPAN

or

NORTH OXFORD ACADEMIC PUBLISHING CO.
242 Banbury Road
Oxford OX2 7D W
England

The annual subscription price for 1985 is about \$ 105.00

Published by
KINOKUNIYA COMPANY LTD.
Tokyo, Japan

Distributed world-wide (outside Japan) by
NORTH OXFORD ACADEMIC PUBLISHING CO.
Oxford, England

ISSN 0027-7630

NAGOYA
MATHEMATICAL JOURNAL

VOL. 99

September 1985

Edited by

KAZUHIKO AOMOTO, TAKEYUKI HIDA, NOBORU ITO, YOSHIYUKI KITAOKA,
TOMIO KUBOTA (Managing Editor), HIDEYUKI MATSUMURA,
SHIGEFUMI MORI, HISASI MORIKAWA, AKIHIKO MORIMOTO,
KATUZI ONO, YOSHIHIRO SHIKATA, TOSHIKAZU SUNADA,
AKIHIRO TSUCHIYA, 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.

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

Shinoda, J.: Countable J_α^s -admissible ordinals	1
Kondo, S.: Type II degenerations of $K3$ surfaces	11
Tsuyumine, S.: Rings of modular forms—On Eichler's problem ...	31
Morikawa, H.: Some results on harmonic analysis on compact quotients of Heisenberg groups	45
Ichimura, H.: A note on quadratic fields in which a fixed prime number splits completely	63
Miyake, K.: The application of the principal ideal theorem to p -groups	73
Itô, M. and Suzuki, N.: The semi-balayability of real convolution kernels	89
Ueno, K.: Projective structures of elliptic differential operators ..	111
Teranishi, Y.: The functional equation of zeta distributions associated with prehomogeneous vector spaces $(\tilde{G}, \tilde{\rho}, M(n, \mathbf{C}))$	131
Koike, M.: Mathieu group M_{24} and modular forms	147
Herzog, J., Vasconcelos, W. V. and Villarreal, R.: Ideals with sliding depth	159
Kaneyuki, S. and Williams, F. L.: Almost paracontact and parahodge structures on manifolds	173