

HIROSHIMA MATHEMATICAL JOURNAL

VOLUME 44, NUMBER 3

NOVEMBER, 2014

PUBLISHED BY

DEPARTMENT OF MATHEMATICS
GRADUATE SCHOOL OF SCIENCE
HIROSHIMA UNIVERSITY

Hiroshima Mathematical Journal

Editors

Kunimochi SAKAMOTO (Managing Editor)	
Makoto ABE	Yoshio AGAOKA
Akihiko INOUE	Akira ISHII
Mishio KAWASHITA	Shun-ichi KIMURA
Ryo KOBAYASHI	Makoto MATSUMOTO
Hiraku NISHIMORI	Makoto SAKUMA
Ichiro SHIMADA	Hiroshi TAMARU
Hirofumi WAKAKI	Masafumi YOSHINO

Hiroshima Mathematical Journal is a continuation of Journal of Science of the Hiroshima University, Series A, Vol. 1~Vol. 24 (1930~1960) and Journal of Science of the Hiroshima University, Series A-I, Vol. 25~34 (1961~1970).

Starting with Volume 4 (1974), each volume of Hiroshima Mathematical Journal consists of three numbers annually. This journal publishes original papers in pure and applied mathematics.

Copyright © by Editorial Board of Hiroshima Mathematical Journal
Department of Mathematics, Graduate School of Science, Hiroshima University

Printed by
Letterpress Co., LTD.
Hiroshima, Japan

Instructions for Authors

1. Manuscripts should be written in English and should contain
 - (i) title
 - (ii) name(s) of author(s)
 - (iii) abstract
 - (iv) 2000 Mathematics Subject Classification Numbers, and key words and phrases
 - (v) body of the paper
 - (vi) references
 - (vii) affiliation(s), address(es) and e-mail address(es)

in this order. For symbols and style conventions, authors should consult current issues of the journal. Color printing may be accepted with some possible charge.

2. Manuscripts should be submitted in duplicate to the HMJ office. Attached should be a separated sheet containing
 - (a) the title of the paper
 - (b) the mailing address (and an e-mail address) of the author who is responsible for proof-readings
 - (c) the running title (condensed title of less than 30 characters).

The manuscript will not usually be returned to the author.

It is preferred that manuscripts be prepared using the LaTeX2e style file of HMJ, which is available from the HMJ webpage, with no special macros. Then it is only necessary for the author to submit a LaTeX source file together with a pdf file (or a dvi file) and (a), (b) and (c) to the HMJ office by e-mail. If we have a trouble in handling the files, then the author may be asked to send a printed manuscript as well.

The LaTeX style file of HMJ, its documentation, and a sample tex file can be obtained from the HMJ webpage.

3. When the manuscript is accepted for publication, the author will be asked for the LaTeX source file and the pdf file (the dvi file) which must be identical to that of the final version of the manuscript.
4. The pdf files of papers published in the journal will be offered to the public without charge on the HMJ webpage. The author will be asked to give consent for the journal to publish electronically as well as in print. Authors reserve the right to post their papers on the authors' homepages.
5. Authors of papers published in the journal will have a total of 50 offprints for papers without charge.
6. The address and the e-mail address of the HMJ office are:

Hiroshima Mathematical Journal
Department of Mathematics
Graduate School of Science
Hiroshima University
Higashi-Hiroshima 739-8526 Japan

Tel: +81-82-424-7350

Fax: +81-82-424-0710

E-mail: hmj@math.sci.hiroshima-u.ac.jp

HMJ webpage: <http://www.math.sci.hiroshima-u.ac.jp/hmj/index.html>

CONTENTS

	PAGE
H. WAKAKI, Y. FUJIKOSHI and V. V. ULYANOV: Asymptotic expansions of the distributions of MANOVA test statistics when the dimension is large	247
T. YOSHIKI: A lower bound on WAFOM	261
R. MIRZAIE: Topological properties of some flat Lorentzian manifolds of low cohomogeneity	267
M. YAMAMOTO, K. KATO and Y. SUGIYAMA: Existence and analyticity of solutions to the drift-diffusion equation with critical dissipation	275
A. KAMADA, H. YANAGIHARA, H. WAKAKI and K. FUKUI: Selecting a shrinkage parameter in structural equation modeling with a near singular covariance matrix by the GIC minimization method	315
K. MIYATANI and M. SANO: An exponential sum and higher-codimensional subvarieties of projective spaces over finite fields.....	327
J. M. MONTESINOS-AMILIBIA: Addendum to “On integral quadratic forms having commensurable groups of automorphisms”	341