

HIROSHIMA MATHEMATICAL JOURNAL

VOLUME 54, NUMBER 1

MARCH, 2024

PUBLISHED BY

MATHEMATICS PROGRAM
GRADUATE SCHOOL OF
ADVANCED SCIENCE AND ENGINEERING
HIROSHIMA UNIVERSITY

Hiroshima Mathematical Journal

Editors

Ichiro SHIMADA (Managing Editor)	
Shoichi FUJIMORI	Koichi FUJIMOTO
Naoki HONDA	Makoto IIMA
Akihiko INOUE	Mishio KAWASHITA
Shun-ichi KIMURA	Yuya KODA
Tetsu MIZUMACHI	Yuki NAITO
Hirofumi WAKAKI	Hirokazu YANAGIHARA

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
Mathematics Program, Graduate School of Advanced Science and Engineering
Hiroshima University

Printed by
Letterpress Co., LTD.
Hiroshima, Japan

Instructions for Authors

Manuscripts should be submitted electronically in PDF format, according to the instruction below, using the online submission form.

1. Manuscripts should be written in English and should contain
 - (i) title
 - (ii) name(s) of author(s)
 - (iii) abstract
 - (iv) 2020 Mathematics Subject Classification Numbers
 - (v) key words
 - (vi) body of the paper
 - (vii) references
 - (viii) 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. The LaTeX style file of HMJ and its documentation can be obtained from the HMJ web page.
2. Manuscripts should be submitted electronically in PDF format using the online submission form (in EditFlow[®]).
EditFlow[®] submission page of HMJ: <https://ef.msp.org/submit/hmj>
3. When the manuscript is accepted for publication, the author will be asked for the LaTeX source file and the pdf file which must be identical to 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 journal's homepages HMJ online and Project Euclid. Authors will be asked to give consent for the journal to publish electronically. Authors reserve the right to post their papers on the authors' homepages.
5. The address and the e-mail address of the HMJ office are:

Hiroshima Mathematical Journal,
Mathematics Program,
Graduate School of Advanced Science and Engineering,
Hiroshima University,
Higashi-Hiroshima,
739-8526 Japan

Tel: +81-82-424-7350
e-mail: hmj@hiroshima-u.ac.jp
HMJ web page: <http://www.math.sci.hiroshima-u.ac.jp/hmj/index.html>

CONTENTS

	PAGE
R. MASUYA: Geometry of weak-bitangent lines to quartic curves and sections on certain rational elliptic surfaces	1
S. FUKASAWA: Galois points and rational functions with small value sets	37
K. KUWATA: Schubert calculus via fermionic variables.....	45
Y. TADA: On categories of faithful quandles with surjective or injective quandle homomorphisms.....	61
H. YAMAGISHI and Y. KAMETAKA: The best constant of the L^p Sobolev-type inequality corresponding to elliptic operator in \mathbf{R}^N	87
J. WEI and B. LIU: Global dynamics of a competition-diffusion-advection system with general boundary conditions.....	103