

ISSN 0030-1566

MATHEMATICAL JOURNAL
OF
OKAYAMA UNIVERSITY

VOL. 61 2019

PUBLISHED BY

DEPARTMENT OF MATHEMATICS
FACULTY OF SCIENCE
OKAYAMA UNIVERSITY
OKAYAMA, JAPAN

MATHEMATICAL JOURNAL OF OKAYAMA UNIVERSITY

FOUNDED BY M. MORIYA, T. INAGAKI, M. OSIMA, T. OTSUKI

EDITED BY

Shoichi FUJIMORI

Masao ISHIKAWA*

Kazuyoshi KIYOHARA

Takeshi TORII

Mitsuyasu HASHIMOTO

Hiroshi KAWABI

Masaharu TANIGUCHI

Yuji YOSHINO

(* : Managing Editor)

Each volume consists of two numbers, and each number which contains about 100 pages will appear semi-annually.

According to circumstances, there are some cases where one volume containing about 200 pages appears annually.

All communications relating to this publication should be addressed to

Mathematical Journal of Okayama University

Department of Mathematics

Faculty of Science

Okayama University

Okayama 700-8530, Japan

E-mail: mjou@okayama-u.ac.jp, journal@math.okayama-u.ac.jp

Information for authors is to be found on the inside back cover.

Visit our web site

<http://www.math.okayama-u.ac.jp/mjou/>

Copyright©2019 by the Editorial Board of Mathematical Journal of Okayama University

Information for authors

Submission of Manuscripts

- (1) Articles on pure and applied mathematics intended for publication in *Mathematical Journal of Okayama University* should be written in English.
- (2) Only original papers not yet published and not simultaneously submitted for publication elsewhere will be accepted.
- (3) Electronically prepared manuscripts in printable files (dvi or pdf) can be sent via e-mail to:

`mjou@okayama-u.ac.jp`, `journal@math.okayama-u.ac.jp`

- (4) Electronic submission in LaTeX style is preferred. If you are unable to submit your manuscript electronically, you should send two hard copies to the Editorial Office of Mathematical Journal of Okayama University, Department of Mathematics, Okayama University, Okayama 700-8530, Japan.
- (5) After acceptance for publication, authors will be requested to send a LaTeX file coded with the style file “jokayama.cls” which (together with all necessary additional information on how to use the style sheet) is available at our homepage:

<http://www.math.okayama-u.ac.jp/mjou/>.

Proofs

Authors will receive page proofs, preferably by e-mail in PDF format. Corrections should be confined to typographical errors. Authors will be charged for excessive corrections. Please correct your galley proofs and return them within 14 days together with the signed copyright agreement.

Reprints

The corresponding author will receive 50 hardcopy reprints free of charge, this number to be shared between joint authors.

Edit and Publishing:

Department of Mathematics,
Faculty of Science, Okayama University
Okayama, JAPAN

Design and Printing Office:

... Co. Ltd.

CONTENTS

	Page
BROWN, S. AND DAVIS, C. The Factorization of 2 and 3 in Cyclic Quartic Fields	167
CAHEN, B. Berezin-Weyl quantization of Heisenberg motion groups	19
HAKIM, D., NOGAYAMA, T. AND SAWANO, Y. Complex interpolation of smoothness Triebel-Lizorkin-Morrey spaces	99
HAMID, N. AND OURA, M. Terwilliger Algebras of Some Group Association Schemes	199
HIGASHIYAMA, K. Reconstruction of inertia groups associated to log divisors from a configuration space group equipped with its collection of log-full subgroups	37
IZADI, F. AND BAGHALAGHDAM, M. On the Diophantine equation in the form that a sum of cubes equals a sum of quintics	75
RAJ, K., ANAND, R. AND PANDOH, S. Cesàro Orlicz sequence spaces and their Köthe-Toeplitz duals	141
RASHID, M. Passage of property (Bw) from two operators to their tensor product	187
SATO, Y. On the classification of ruled minimal surfaces in pseudo-Euclidean space	173
SHIMENO, N. A limit transition from the Heckman-Opdam hypergeometric functions to the Whittaker functions associated with root systems	129
TASAKA, F. The number of simple modules in a block with Klein four hyperfocal subgroup	159
WATANABE, T. On the structure of the profile of finite connected quandles	85
YANG, Y. On the existence of non-finite coverings of stable curves over complete discrete valuation rings	1

JANUARY 2019

Vol. 61

CONTENTS

	Page
YANG, Y. On the existence of non-finite coverings of stable curves over complete discrete valuation rings	1
CAHEN, B. Berezin-Weyl quantization of Heisenberg motion groups	19
HIGASHIYAMA, K. Reconstruction of inertia groups associated to log divisors from a configuration space group equipped with its collection of log-full subgroups	37
IZADI, F. AND BAGHALAGHDAM, M. On the Diophantine equation in the form that a sum of cubes equals a sum of quintics	75
WATANABE, T. On the structure of the profile of finite connected quandles	85
HAKIM, D., NOGAYAMA, T. AND SAWANO, Y. Complex interpolation of smoothness Triebel-Lizorkin-Morrey spaces	99
SHIMENO, N. A limit transition from the Heckman-Opdam hypergeometric functions to the Whittaker functions associated with root systems	129
RAJ, K., ANAND, R. AND PANDOH, S. Cesàro Orlicz sequence spaces and their Köthe-Toeplitz duals	141
TASAKA, F. The number of simple modules in a block with Klein four hyperfocal subgroup	159
BROWN, S. AND DAVIS, C. The Factorization of 2 and 3 in Cyclic Quartic Fields	167
SATO, Y. On the classification of ruled minimal surfaces in pseudo-Euclidean space	173
RASHID, M. Passage of property (Bw) from two operators to their tensor product	187
HAMID, N. AND OURA, M. Terwilliger Algebras of Some Group Association Schemes	199

**ON THE EXISTENCE OF NON-FINITE COVERINGS OF
STABLE CURVES OVER COMPLETE DISCRETE
VALUATION RINGS**

YU YANG

Reprinted from MATHEMATICAL JOURNAL OF OKAYAMA UNIVERSITY
Vol. 61, 2019

**BEREZIN-WEYL QUANTIZATION OF HEISENBERG
MOTION GROUPS**

To the memory of my father, Alfred Cahen

BENJAMIN CAHEN

Reprinted from MATHEMATICAL JOURNAL OF OKAYAMA UNIVERSITY
Vol. 61, 2019

**RECONSTRUCTION OF INERTIA GROUPS ASSOCIATED
TO LOG DIVISORS FROM A CONFIGURATION SPACE
GROUP EQUIPPED WITH ITS COLLECTION OF
LOG-FULL SUBGROUPS**

KAZUMI HIGASHIYAMA

Reprinted from MATHEMATICAL JOURNAL OF OKAYAMA UNIVERSITY
Vol. 61, 2019

**ON THE DIOPHANTINE EQUATION IN THE FORM
THAT A SUM OF CUBES EQUALS A SUM OF QUINTICS**

FARZALI IZADI AND MEHDI BAGHALAGHDAM

Reprinted from MATHEMATICAL JOURNAL OF OKAYAMA UNIVERSITY
Vol. 61, 2019

**ON THE STRUCTURE OF THE PROFILE OF FINITE
CONNECTED QUANDLES**

TAISUKE WATANABE

Reprinted from MATHEMATICAL JOURNAL OF OKAYAMA UNIVERSITY
Vol. 61, 2019

**COMPLEX INTERPOLATION OF SMOOTHNESS
TRIEBEL-LIZORKIN-MORREY SPACES**

DENNY IVANAL HAKIM, TORU NOGAYAMA AND YOSHIHIRO SAWANO

Reprinted from MATHEMATICAL JOURNAL OF OKAYAMA UNIVERSITY
Vol. 61, 2019

**A LIMIT TRANSITION FROM THE HECKMAN-OPDAM
HYPERGEOMETRIC FUNCTIONS TO THE WHITTAKER
FUNCTIONS ASSOCIATED WITH ROOT SYSTEMS**

NOBUKAZU SHIMENO

Reprinted from MATHEMATICAL JOURNAL OF OKAYAMA UNIVERSITY
Vol. 61, 2019

**CESÀRO ORLICZ SEQUENCE SPACES AND THEIR
KÖTHE-TOEPLITZ DUALS**

KULDIP RAJ, RENU ANAND AND SURUCHI PANDOH

Reprinted from MATHEMATICAL JOURNAL OF OKAYAMA UNIVERSITY
Vol. 61, 2019

**THE NUMBER OF SIMPLE MODULES IN A BLOCK
WITH KLEIN FOUR HYPERFOCAL SUBGROUP**

FUMINORI TAsAKA

Reprinted from MATHEMATICAL JOURNAL OF OKAYAMA UNIVERSITY
Vol. 61, 2019

**THE FACTORIZATION OF 2 AND 3 IN CYCLIC QUARTIC
FIELDS**

STEPHEN C. BROWN AND CHAD T. DAVIS

Reprinted from MATHEMATICAL JOURNAL OF OKAYAMA UNIVERSITY
Vol. 61, 2019

**ON THE CLASSIFICATION OF RULED MINIMAL
SURFACES IN PSEUDO-EUCLIDEAN SPACE**

YUICHIRO SATO

Reprinted from MATHEMATICAL JOURNAL OF OKAYAMA UNIVERSITY
Vol. 61, 2019

**PASSAGE OF PROPERTY (Bw) FROM TWO OPERATORS
TO THEIR TENSOR PRODUCT**

M.H.M.RASHID

Reprinted from MATHEMATICAL JOURNAL OF OKAYAMA UNIVERSITY
Vol. 61, 2019

**TERWILLIGER ALGEBRAS OF SOME GROUP
ASSOCIATION SCHEMES**

NUR HAMID AND MANABU OURA

Reprinted from MATHEMATICAL JOURNAL OF OKAYAMA UNIVERSITY
Vol. 61, 2019