

FORUM MATHEMATICUM

MANAGING EDITOR

Jan H. Bruinier, Darmstadt

EDITORIAL BOARD

Jörg Brüdern, Göttingen

Frederick R. Cohen, Rochester

Henri Darmon, Montreal

Manfred Droste, Leipzig

Frank Duzaar, Erlangen

Siegfried Echterhoff, Münster

Maria Gordina, Storrs

Karl-Hermann Neeb, Erlangen

Junjiro Noguchi, Tokyo

Freydoon Shahidi, West Lafayette

Christopher D. Sogge, Baltimore

Anna Wienhard, Heidelberg

DE GRUYTER

FORUM MATHEMATICUM is devoted entirely to the publication of original research articles in all fields of pure and applied mathematics, including mathematical physics. Expository surveys, research announcements, book reviews, etc. will not be published.

All information regarding subscriptions, Open access, back volumes and orders is available online at www.degruyter.com/forum.

ABSTRACTED/INDEXED IN Baidu Scholar · Clarivate Analytics: Current Contents/Physical, Chemical and Earth Sciences; Journal Citation Reports/Science Edition; Science Citation Index; Science Citation Index Expanded; Web of Science · CNKI Scholar (China National Knowledge Infrastructure) · CNPIEC · Dimensions · EBSCO (relevant databases) · EBSCO Discovery Service · Elsevier: SCOPUS · Gale/Cengage · Genamics JournalSeek · Google Scholar · Japan Science and Technology Agency (JST) · J-Gate · JournalGuide · JournalTOCs · KESLI-NDSL (Korean National Discovery for Science Leaders) · Mathematical Reviews (MathSciNet) · Microsoft Academic · Naviga (Softweco) · Primo Central (ExLibris) · ProQuest (relevant databases) · Publons · ReadCube · SCImago (SJR) · Sherpa/RoMEO · Summon (Serials Solutions/ProQuest) · TDNet · Ulrich's Periodicals Directory/ulrichsweb · WanFang Data · WorldCat (OCLC) · Zentralblatt Math (zbMATH).

ISSN 0933-7741 · e-ISSN 1435-5337 · CODEN FOMAEF

RESPONSIBLE EDITOR Jan H. Bruinier, Department of Mathematics, Technische Universität Darmstadt, Schloßgartenstr. 7, 64289 Darmstadt, Germany.
Email: bruinier@mathematik.tu-darmstadt.de

JOURNAL MANAGER Theresa Haney, De Gruyter, Genthiner Straße 13, 10785 Berlin, Germany.
Tel.: +49 (0)30 260 05-375, Fax: +49 (0)30 260 05-250
Email: theresa.haney@degruyter.com

RESPONSIBLE FOR ADVERTISEMENTS Claudia Neumann, De Gruyter, Genthiner Straße 13, 10785 Berlin, Germany.
Tel.: +49 (0)30 260 05-226, Fax: +49 (0)30 260 05-264
Email: anzeigen@degruyter.com

© 2018 Walter de Gruyter GmbH, Berlin/Boston

TYPESETTING Dimler & Albroscheit, Münchenberg

PRINTING Franz X. Stickle Druck und Verlag e.K., Ettenheim



Contents

Jan Frahm, Feng Su

Upper bounds for geodesic periods over rank one locally symmetric spaces — 1065

Victor Cuauhtemoc García, Florin Nicolae

Additive bases with coefficients of newforms — 1079

Xabier García-Martínez, Tim Van der Linden

A note on split extensions of bialgebras — 1089

Yingkun Li

Petersson norm of cusp forms associated to real quadratic fields — 1097

Alfred Geroldinger, Wolfgang Alexander Schmid

A realization theorem for sets of lengths in numerical monoids — 1111

Lydia Außenhofer

On the non-existence of the Mackey topology for locally quasi-convex groups — 1119

Jiaxin Hu, Xuliang Li

The Davies method revisited for heat kernel upper bounds of regular Dirichlet forms on metric measure spaces — 1129

Michelle Bucher, Nicolas Monod

The cup product of Brooks quasimorphisms — 1157

Zhen-Qing Chen, Panki Kim, Takashi Kumagai, Jian Wang

Heat kernel estimates for time fractional equations — 1163

Mahmoud Filali, Jorge Galindo

Extreme non-Arens regularity of the group algebra — 1193

Paul Arnaud Songhafouo Tsopméné, Victor Turchin

Rational homology and homotopy of high-dimensional string links — 1209

Hongya Gao, Miaomiao Jia

Global integrability for solutions to some anisotropic problem with nonstandard growth — 1237

Turhan Karaman

Hardy operators on Musielak–Orlicz spaces — 1245

David Pauksztello, Manuel Saorín, Alexandra Zvonareva

Contractibility of the stability manifold for silting-discrete algebras — 1255

Shiquan Ren

Order of the canonical vector bundle over configuration spaces of spheres — 1265

Tianyi Ren, Yakun Xi, Cheng Zhang

An endpoint version of uniform Sobolev inequalities — 1279

Kunio Hidano, Dongbing Zha

Space-time L^2 estimates, regularity and almost global existence for elastic waves — 1291

Maria Cristina Perez-Garcia

k -spaces and duals of non-archimedean metrizable locally convex spaces — 1309

Alexander Grigor'yan, Yuri Muranov, Vladimir Vershinin, Shing-Tung Yau

Path homology theory of multigraphs and quivers — 1319

