

FORUM MATHEMATICUM

MANAGING EDITOR

Jan H. Bruinier, Darmstadt

HONORARY EDITORIAL BOARD MEMBER

Andrew Ranicki, Edinburgh

EDITORIAL BOARD

Jörg Brüdern, Göttingen

Frederick R. Cohen, Rochester

Manfred Droste, Leipzig

Frank Duzaar, Erlangen

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 will not be published.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 · Celdes · 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 · EBSCO (relevant databases) · EBSCO Discovery Service · Elsevier: SCOPUS · Gale/Cengage · Genamics JournalSeek · Google Scholar · 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 · ResearchGate · 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
Printed in Germany.



Contents

Brad Rodgers, Kannan Soundararajan

The variance of divisor sums in arithmetic progressions — 269

Dikran Dikranjan, Dmitri Shakhmatov

Characterizing Lie groups by controlling their zero-dimensional subgroups — 295

Yara Elias, Carlos de Vera-Piquero

CM cycles on Kuga–Sato varieties over Shimura curves and Selmer groups — 321

Arnab Mitra, Steven Spallone

Towards a Goldberg–Shahidi pairing for classical groups — 347

Mehran Motiee

On the non-existence of cyclic splitting fields for division algebras — 385

Natalia Cadavid-Aguilar, Jesús González, Darwin Gutiérrez, Aldo Guzmán-Sáenz, Adriana Lara

Sequential motion planning algorithms in real projective spaces: An approach to their immersion dimension — 397

Sai-Kee Yeung

Very ampleness of the bicanonical line bundle on compact complex 2-ball quotients — 419

Ahmed Sebbar, Oumar Wone

Anharmonic solutions to the Riccati equation and elliptic modular functions — 433

Mingming Cao, Qingying Xue

A non-homogeneous local Tb theorem for Littlewood–Paley g_λ^* -function with L^p -testing condition — 457

Yang Pan

Saturation rank for finite group schemes: Finite groups and infinitesimal group schemes — 479

Giuseppe Marino, Valentina Pepe

On symplectic semifield spreads of $\text{PG}(5, q^2)$, q odd — 497

Richard N. Ball, Vincenzo Marra, Daniel McNeill, Andrea Pedrini

From Freudenthal’s spectral theorem to projectable hulls of unital Archimedean lattice-groups, through compactifications of minimal spectra — 513

Kouyemon Iriye, Daisuke Kishimoto

Golodness and polyhedral products for two-dimensional simplicial complexes — 527

