

Canadian
Mathematical

Bulletin

canadien de
mathématiques

2025, 68/3

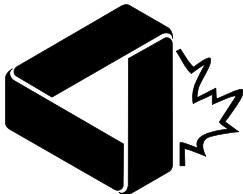
September / septembre



Canadian Mathematical Society
Société mathématique du Canada



CAMBRIDGE
UNIVERSITY PRESS



CANADIAN MATHEMATICAL BULLETIN

BULLETIN CANADIEN DE MATHÉMATIQUES

EDITORS-IN-CHIEF / RÉDACTEURS-EN-CHEF

Antonio Lei & Javad Mashreghi

Département de mathématiques et de statistique

Université d'Ottawa & Université Laval

cmb-editors@cms.math.ca / bcm-redacteurs@smc.math.ca

ASSOCIATE EDITORS / RÉDACTEURS ASSOCIÉS

Amir Akbary
University of Lethbridge

Fabrizio Andreatta
Università Studi di Milano

Hans Boden
McMaster University

Kathrin Bringmann
University of Cologne

Lia Bronsard
McMaster University

Lucy Campbell
Carleton University

Guillaume Chapuy
Université Paris Diderot

Jingyi Chen
University of British Columbia

Adam Clay
University of Manitoba

Benoit Collins
Kyoto University

Octav Cornea
Université de Montréal

Michelle Delcourt
Toronto Metropolitan University

Dmitry Jakobson
McGill University

Shaun Fallat
University of Regina

Ilijas Farah
York University

Ailana Fraser
University of British Columbia

Philippe Gille
CNRS & University Claude Bernard

Slim Ibrahim
University of Victoria

Alex Iosevich
University of Rochester

Michael Jury
University of Florida

Joel Kamnitzer
McGill University

Krzysztof Kapulkin
University of Western Ontario

Matilde Lalín
Université de Montréal

Monika Ludwig
TU Wien

Rahim Moosa
University of Waterloo

Monica Nevins
Université d'Ottawa

Robert Osburn
University College Dublin

Dmitry Panchenko
University of Toronto

Julia Plavnik
Indiana University - Bloomington

Malabika Pramanik
University of British Columbia

Marek Ptak
University of Agriculture in Krakow

Frédéric Rochon
Université du Québec à Montréal

William Ross
University of Richmond

Hadi Salmasian
Université d'Ottawa

Alistair Savage
Université d'Ottawa

Terry Soo
University College London

Valentino Tosatti
McGill University

Shawn XianFu Wang
University of British Columbia

Liam Watson
University of British Columbia

Depng Ye
Memorial University of Newfoundland

Yingfei Yi
University of Alberta

© Canadian Mathematical Society / Société mathématique du Canada, 2025

All rights reserved / tous droits réservés

Suite 209, 1725 St. Laurent Blvd., Ottawa, ON K1G 3V4

ISSN 0008-4395 (Print / imprimé), 1496-4287 (Online / électronique)

Printed by Sheridan, a CJK Group Company.

The geometric figure on the cover, a four-dimensional polytope, was redrawn by Javad Mashreghi from the inside cover page of the celebrated book 'Regular Polytopes' by Harold Scott MacDonald Coxeter (1907–2003), one of the greatest geometers of the 20th century. Coxeter, a Fellow of the Royal Society of Canada and a Fellow of the Royal Society (London), joined the University of Toronto in 1936 and worked there enthusiastically for 60 years. Since 1978, the Canadian Mathematical Society has awarded the Coxeter-James Prize in his honor.

La figure géométrique sur la couverture, un polytope en dimension quatre, a été reprise par Javad Mashreghi du plat intérieur du célèbre ouvrage Regular Polytopes de Harold Scott MacDonald Coxeter (1907–2003), l'un des plus grands géomètres du XXe siècle. Membre de la Société royale du Canada et de la Royal Society (Londres), H.S.M. Coxeter s'est joint au corps professoral de l'Université de Toronto en 1936, où il a travaillé avec enthousiasme pendant 60 ans. Depuis 1978, la Société mathématique du Canada décerne le prix Coxeter-James en son honneur.

In this issue / Dans ce numéro

2025, 68/3

-
- | | | |
|-----|---|---|
| 653 | Complex linear differential equations with solutions in weighted Dirichlet spaces and derivative Hardy spaces | <i>Qingze Lin and Huayou Xie</i> |
| 667 | A function field analog of Jacobi's theorem on sums of squares and its moments | <i>Wentang Kuo, Yu-Ru Liu, and Yash Totani</i> |
| 684 | Cyclicity of the shift operator through Bezout identities | <i>Emmanuel Fricain and Romain Lebreton</i> |
| 709 | Rarity of pseudo-null Iwasawa modules for p -adic Lie extensions | <i>Takenori Kataoka</i> |
| 725 | Zero-dimensional metrizable CDH space X such that X^2 is not CDH | <i>Michal Hevassy</i> |
| 729 | On even K -groups over p -adic Lie extensions of global function fields | <i>Meng Fai Lim</i> |
| 744 | Generalized Casimir operators for loop Lie superalgebras | <i>Abhishek Das and Santosa Pattanayak</i> |
| 761 | Construction of unital quantales | <i>Shengwei Han and Jiaxin Lv</i> |
| 777 | Extending surjective maps preserving the norm of symmetric Kubo-Ando means | <i>Emmanuel Chetcuti and Curt Healey</i> |
| 787 | A bound on the μ -invariants of supersingular elliptic curves | <i>Rylan Gajek-Leonard</i> |
| 797 | Constructing skew left braces whose additive group has trivial centre | <i>Adolfo Ballester-Bolinches, Ramón Esteban-Romero, Paz Jiménez-Seral, and Vicent Pérez-Calabuig</i> |
| 805 | An Iwahori theoretic mod p local Langlands correspondence | <i>Anand Chitao</i> |
| 818 | Characterizations and models for the $C_{1,r}$ class and quantum annulus | <i>Sourav Pal and Nitin Tomar</i> |
| 834 | On boundary-non-preserving mappings with Poletsky inequality | <i>Victoria Desyatka and Evgeny Sevost'yanov</i> |
| 856 | Reduction of bielliptic surfaces | <i>Teppei Takamatsu</i> |
| 874 | On rings which are sums of subrings | <i>Ryszard R. Andruszkiewicz and Marek Kępczyk</i> |
| 883 | Schatten class composition operators | <i>Qinghua Hu and Jingbo Xia</i> |
| 891 | Well-posedness for the 3-D generalized micropolar system in critical Fourier-Besov-Morrey spaces | <i>Peng Gao, Baoquan Yuan, and Tiantian Zhai</i> |
| 908 | A residue theorem for rational functions on star-shaped domains | <i>Mostafa Nasri</i> |
| 914 | Asymptotics and sign patterns of Hecke polynomial coefficients | <i>Erick Ross and Hui Xue</i> |
| 927 | Coloring invariants for links in $\Sigma_g \times S^1$ | <i>Zhiyun Cheng and Hongzhu Gao</i> |

939	Hilbert's 10th problem via Mordell curves	<i>Somnath Jha, Debanjana Kundu, and Dipramit Majumdar</i>
950	On the perimeter, diameter and circumradius of ordinary hyperbolic reduced polygons	<i>Ádám Sagmeister</i>
966	Moments of the free Jacobi process: Amatrix approach	<i>Nizar Demni and Tarek Hamdi</i>
992	Generalized Knill–Laflamme theorem for families of isoclinic subspaces	<i>David W. Kribs, Rajesh Pereira, and Mukesh Taank</i>
1011	Bridging colorings of virtual links from virtual biquandles to biquandles	<i>Mohamed Elhamdadi and Manpreet Singh</i>