

The *Glasgow Mathematical Journal* is the continuation of the *Proceedings of the Glasgow Mathematical Association*. It was founded in 1952 by the late Professor T. M. MacRobert and published with the support of the University Court of the University of Glasgow. The present name was adopted in 1967 and since 1987 the *Journal* has been owned by the Glasgow Mathematical Journal Trust, an independent charitable trust (Scottish Charity Number SC006017).

Editorial Policy

The Glasgow Mathematical Journal publishes high quality original research papers in pure and applied mathematics. Its policy is to feature a wide variety of research areas and it welcomes the submission of papers from all parts of the world. Selection for publication is on the basis of reports from specialist referees commissioned by the Subject Editors or Editor-in-Chief.

Submission of Manuscripts

The journal uses an online submission and refereeing system, EditFlow. To submit your paper, please go to: <https://cup.msp.org/submit/gmj>.

When submitting a paper you will be asked to nominate a subject editor. The current subject editors and their areas of interest are as follows:

SUBJECT EDITORS:

Andrew Baker	Algebraic Topology	Martin Hallnäs	Mathematical Physics, Integrable Systems,
Alex Bartel	Number Theory, Arithmetic Geometry, Finite Groups	Xin Li	Orthogonal Polynomials and Special Functions
Gavin Brown	Algebraic Geometry	Volodymyr Mazorchuk	Functional Analysis, Operator Algebras
Indira Chatterji	Group Theory, Geometric Group Theory		Representation Theory, Lie Algebras, Semigroups, Categorification
Joel Fine	Differential Geometry, Geometric Analysis	Constanze Roitzheim	Algebraic Topology
Stefan Friedl	Geometric Topology	Colva M. Roney-Dougall	Finite Group Theory, Computational Algebra, Algebraic Groups
Jan Grabowski	Noncommutative Rings and Algebras, Quantum Algebra, Cluster Algebras, Representation Theory		

You should choose a subject editor closest to your field. Alternatively you may nominate the Editor-in-Chief, Brendan Owens, who will assign a Subject Editor to deal with your submission.

During the submission process you will be asked to confirm that the paper is not being considered for publication elsewhere.

The Journal encourages the use of .pdf files. LaTeX and Postscript as well as other formats can be uploaded but these will be converted into .pdf format. Note that .dvi files cannot be converted. Care should be taken with this option, especially if non-standard macros are being used, and the .pdf version the system produces should be carefully checked before final submission.

Upon acceptance of a paper, the author will be asked to transfer copyright to the Glasgow Mathematical Journal Trust.

Layout of manuscripts

Papers should be typed or word-processed in double spacing throughout, with wide margins and on one side of the paper. They should be prepared so as to conform to the practice in current issues of the Journal as regards general layout, references, tables and figures. Please avoid footnotes if possible. Papers must begin with an abstract of not more than 200 words, and they should list at least one AMS 2010 classification number or keyword. This information is also required before your manuscript can be uploaded. Instructions regarding unusual symbols or any typographical point that might cause confusion should be provided on a separate sheet. These may be uploaded as separate files. If special fonts are used, they should conform to the Journal's practice. Authors are reminded that they should retain a copy of anything submitted for publication since neither the Journal nor the publisher can accept liability for any loss.

Illustrations

Text figures must be suitable for direct photographic reproduction and supplied separate from the text but allocated clearly to sections of the text. Low resolution version may be uploaded at submission as separate files. Originals of figures should not be sent until the paper has been accepted. A list of captions for figures should be attached separately. Black and white figures are free for both online and print publication, while colour figures are free for online publication only. Colour figures for print publication are subjected to RightsLink charges (£200/\$320 per figure). Figures should be submitted in the Encapsulated PostScript (EPS/eps) format; when that is not possible, Word documents containing figures and illustrations in .jpg format are also acceptable.

References

References should be placed at the end of the paper, arranged and numbered in alphabetical order of the author's names. Titles of journals should be abbreviated as in *Mathematical Reviews*. In the text, reference numbers should be enclosed in square brackets to distinguish them from formula numbers which should be quoted in round brackets. A reference to a book should give the author, title (in italics), edition, publisher, year of publication; e.g.

[1] P. T. Johnstone, *Stone Spaces*, Cambridge Studies in Advanced Math. no. 3 (Cambridge University Press, 1982).

A reference to an article should give the author, title of article, short title of periodical (in italics), series number (if any), volume number, year, and the beginning and end pages of the paper; e.g.

[2] R. Guralnick, T. Pentilla, C. E. Praeger and J. Saxl, Finite linear groups, *Proc. London Math. Soc.* (3) 78 (1999), 167-214.

Proofreading

Prior to publication sets of proofs of each paper will be sent to authors. For papers with more than one author the proofs are sent to the first named author unless the Editors receive other instructions. Authors are asked to correct and return proofs promptly. Typographical or factual errors only may be changed at proof stage. The publisher reserves the right to charge authors for excessive corrections of nontypographical errors. No page charge is made.

Offprints

No paper offprints are provided, but the corresponding author will be sent the pdf of the published article. Print offprints may be purchased at extra cost at proof stage.

Grants

The Glasgow Mathematical Journal Trust Fund offers grants in support of mathematical projects and events of demonstrable benefit to mathematics in Scotland. Further details and application forms can be obtained from <https://www.gmjtrust.org>.

This journal issue has been printed on FSC™-certified paper and cover board. FSC is an independent, non-governmental, not-for-profit organization established to promote the responsible management of the world's forests. Please see www.fsc.org for information.

Printed and bound by CPI Group (UK) Ltd, Croydon, CR0 4YY

© Glasgow Mathematical Journal Trust 2023

Glasgow Mathematical Journal

Volume 65 Part S1 May 2023

CONTENTS

British Mathematical Colloquium-British Applied Mathematics Colloquium
Glasgow 2021

Guest Editor: Alex Bartel

Editorial	S1
Rida Ait El Manssour, Marc Härkönen and Bernd Sturmfels , Linear PDE with constant coefficients	S2
Ben Davison , A boson-fermion correspondence in cohomological Donaldson–Thomas theory	S28
Xin Li , Left regular representations of Garside categories I. C^* -algebras and groupoids	S53
Andrew N. W. Hone , Casting light on shadow Somos sequences	S87
Bhargavi Jonnadula, Jonathan P. Keating and Francesco Mezzadri , On the moments of characteristic polynomials	S102
Vincent Knibbeler, Sara Lombardo and Casper Oelen , Polyhedral groups in $G_2(\mathbb{C})$	S123
Efthymios Sofos , Gaps between prime divisors and analogues in Diophantine geometry	S129
Alex Evetts , Conjugacy growth in the higher Heisenberg groups	S148

Cambridge Core

For further information about this journal
please go to the journal website at:
[cambridge.org/GMJ](https://www.cambridge.org/GMJ)



CAMBRIDGE
UNIVERSITY PRESS