

INFORMATION FOR AUTHORS

The *Bulletin of the Australian Mathematical Society* aims at quick publication of original research in all branches of mathematics. To ensure speedy publication, only articles which are sufficiently well presented, able to be published without revision, and which are judged by the Editor (often in consultation with an Associate Editor) to be competitive are refereed. This policy is in the interests of authors, as a quick rejection is better than a slow rejection. The *Bulletin* receives more than five times the material that can be published, therefore there are many commendable papers not accepted. Editorial decisions on acceptance or otherwise are taken quickly, normally within a month of receipt of the paper. Papers are accepted only after peer review.

Manuscripts are accepted for review with the understanding that the same work is not concurrently submitted elsewhere. For a paper to be acceptable for publication, not only should it contain new and interesting results, but also

- (i) the exposition should be clear and attractive, and
- (ii) the manuscript should be in publishable form, without revision.

Further information regarding these requirements may be found through our website www.austms.org.au/Bulletin. Authors are asked to avoid, as far as possible, the use of mathematical symbols in the title.

Articles should be prepared in \LaTeX using $\mathcal{A}\mathcal{M}\mathcal{S}$ - \LaTeX packages and submitted as a PDF file via our journal management system, at www.austms.org.au/Publications/Submissions/BAustMS. This permits authors to track their papers through the editorial process. Recent versions of \TeX are able to produce PDF files directly. A \LaTeX class file for the *Bulletin* can be downloaded from the website. Authors who need assistance may email the secretary of the *Bulletin* at editor@bulletin.austms.org.au.

Authors are advised to keep copies of all files of the submitted article; the *Bulletin* will not accept responsibility for any loss.

EDITORIAL POLICY

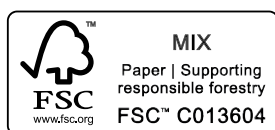
1. References. Arrange references alphabetically (by surname of the first author) and cite them numerically in the text. Ensure the accuracy of the references: authors' names should appear as in the work quoted. Include in the list of references only those works cited, and avoid citing works which are in preparation or submitted. Where the work cited is not readily accessible (for example, a preprint) a copy of the article should be included with your submission.

2. Abstracts.

1. Each paper must include an abstract of not more than 150 words, which should contain a brief but informative summary of the contents of the paper, but no inessential details.
2. The abstract should be self-contained, but may refer to the title.
3. Specific references (by number) to a section, proposition, equation or bibliographical item should be avoided.

3. Subject Classification and Key Words. Authors should include a few key words and phrases and one or more classification numbers, following the American Mathematical Society 2020 Mathematics Subject Classification for all codes. Details of this scheme can be found on the web at www.ams.org/msc.

4. Abstracts of PhD Theses. The *Bulletin* endeavours to publish abstracts of all accepted Australasian PhD theses in mathematics. One restriction, however, is that the abstract must be received by the Editor within six months of the degree being approved.



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

Table of Contents

The chromatic number of (P_6, C_4)-free graphs	1
<i>Lan, K., Zhou, Y. & Liu, F.</i>	
Affine convolutions, Ramanujan–Fourier expansions and Sophie Germain primes	11
<i>Fuentes, E.</i>	
p-adic quotient sets: Linear recurrence sequences	19
<i>Antony, D. & Barman, R.</i>	
The paucity problem for certain symmetric Diophantine equations	29
<i>Wooley, T. D.</i>	
On a conjecture concerning the number of solutions to $a^x + b^y = c^z$	40
<i>Le, M. H. & Styer, R.</i>	
Notes on Atkin–Lehner theory for Drinfeld modular forms	50
<i>Dalal, T. & Kumar, N.</i>	
On p-adic interpolation in two of Mahler’s problems	69
<i>De Paula Miranda, B. & Lelis, J.</i>	
Sin, cos, exp and log of Liouville numbers	81
<i>Chalebgwa, T. P. & Morris, S. A.</i>	
An amazing identity of Gauss and Jenkins’ lemma	86
<i>Chan, H. H. & Chan, S. H.</i>	
A note on powerful numbers in short intervals	99
<i>Chan, T. H.</i>	
Distribution of r-free integers over a floor function set	107
<i>Tangsupphathawat, P., Srichan, T. & Laohakosol, V.</i>	
On the number of nearly self-conjugate partitions	114
<i>Lin, B. L. S. & Sun, S.</i>	
Some criteria for solvability and nilpotency of finite groups by strongly monolithic characters	120
<i>Güngör, S. B. & Erkoç, T.</i>	
Recognising Ree groups ${}^2G_2(q)$ using the codegree set	125
<i>Guan, H., Zhang, X. & Yang, Y.</i>	
Multipliers on the second dual of abstract Segal algebras	133
<i>Nemati, M. & Sohaei, Z.</i>	
$B_n^p(F_n)$ has no nontrivial idempotents	142
<i>Liu, Y. & Zhang, J.</i>	
C^*-algebras of self-similar action of groupoids on row-finite directed graphs	150
<i>Yusnitha, I.</i>	
A remark on the geometric interpretation of the A3w condition from optimal transport	162
<i>Rankin, C.</i>	
A rigidity property of pluriharmonic maps from projective manifolds	166
<i>Huang, C.-H.</i>	
Abstracts of PhD Theses	
Explicit Mertens’ theorems for number fields	169
<i>Lee, E. S.</i>	
Trotter–Kato product formula and an approximation formula for a propagator in symmetric operator ideals	173
<i>Akhymbek, M.</i>	
Essays on strong and weak approximations of stochastic differential equations	175
<i>Liu, G.</i>	