# MATHEMATICAL PROCEEDINGS

(formerly Proceedings)

of the Cambridge Philosophical Society

VOLUME 161





Published by the Press Syndicate of the University of Cambridge The Pitt Building, Trumpington Street, Cambridge CB2 1RP, United Kingdom

CAMBRIDGE UNIVERSITY PRESS University Printing House, Shaftesbury Road, Cambridge CB2 8BS, United Kingdom 32 Avenue of the Americas, New York, NY 10013–2473, USA 477 Williamstown Road, Port Melbourne, VIC 3207, Australia C/Orense, 4, planta 13, 28020 Madrid, Spain Lower Ground Floor, Nautica Building, The Water Club, Beach Road, Granger Bay, Cape Town 8005, South Africa

© Cambridge Philosophical Society 2016

Printed in the United Kingdom by Bell and Bain Limited, Glasgow

# **INDEX FOR VOLUME 161**

	PAGE
Anoussis, M., Katavolos, A. & Todorov, I. G. Ideals of the Fourier algebra, supports and harmonic operators	223
Barnes, D. A monoidal algebraic model for rational SO(2)-spectra	167
Benoist, Y. & De Saxcé, N. Convolution in perfect Lie groups	31
Bernik, J. & Popov, A. I. Obstructions for semigroups of partial isometries to be self-adjoint	107
Cohen, F. R. & Stafa, M. On spaces of commuting elements in Lie groups	381
<b>Csörnyei, M. &amp; Wilson, B.</b> Tangents of $\sigma$ -finite curves and scaled oscillation	1
Egidi, M. Pestov's identity on frame bundles and applications	357
Frantzikinakis, N. & Host, B. Asymptotics for multilinear averages of multiplicative functions	87
Garner, R. & Schäppi, D. When coproducts are biproducts	47
Goto, S., Hong, J. & Vasconcelos, W. V. Hilbert polynomials of j-transforms	305
Han, Y., Lee, MY. & Lin, C. C. <i>Tb</i> theorem on product spaces	117
Haynes, A., Koivusalo, H., Walton, J. & Sadun, L. Gaps problems and frequencies of patches in	117
cut and project sets	65
Hosseini, K., Lovett, S., Moshkovitz, G. & Shapira, A. An improved lower bound for arithmetic regularity	193
Houdayer, C. & Ueda, Y. Asymptotic structure of free product von Neumann algebras	489
<b>Jiang, Y., Lü, G. &amp; Yan, X.</b> Mean value theorem connected with Fourier coefficients of Hecke-Maass forms for $SL(m, \mathbb{Z})$ .	339
Kaliszewski, S. & Quigg, J. Erratum to "Full and reduced <i>C</i> *-coactions". Math. Proc. Camb. Phil.	
Soc. 116 (1994), 435–450	379
Kim, S. & Kim, I. On deformation spaces of nonuniform hyperbolic lattices	283
Korepanov, I. G., Sharygin, G. I. & Talalaev, D. V. Cohomologies of <i>n</i> -simplex relations	203
Kryński, W. Webs and the Plebański equation	455
Liechti, L. Positive braid knots of maximal topological 4-genus	559
Mannan, W. H. Explicit generators for the relation module in the example of Gruenberg-Linnell	199
Matar, A. Selmer Groups and Anticyclotomic $Z_p$ -extensions	409
Mauldin, R. D. Subfields of R with arbitrary Hausdorff dimension	157
Mehrdad, B. & Zhu, L. Limit Theorems for Empirical Density of Greatest Common Divisors .	517
Nucinkis, B. E. A. & Petrosyan, N. Complete Bredon cohomology and its applications to hierarchically defined groups	143
Plaumann, D. & Putinar, M. A relative Grace Theorem for complex polynomials	17
Raeburn, I. Deformations of Fell bundles and twisted graph algebras	535
Shmerkin, P. & Solomyak, B. Absolute continuity of complex Bernoulli convolutions	435
Swinnerton-Dyer, S. P. Curves of small genus on certain K3 surfaces	103
Takase, M. & Tanaka, K. Regular-equivalence of 2-knot diagrams and sphere eversions	237
Teräväinen, J. Almost primes in almost all short intervals	247
Thorner, J. A variant of the Bombieri-Vinogradov theorem in short intervals and some questions of	
Serre	53
Totaro, B. Rationality does not specialise among terminal varieties	13
Weingartner, A. On the degrees of polynomial divisors over finite fields	469

#### INSTRUCTIONS TO AUTHORS

#### 1. Preparation of Manuscripts

A paper should be submitted electronically to mpeditor@hermes.cam.ac.uk in pdf form only.Authors are encouraged to prepare their manuscripts in LaTeX 2e using the PSP class file. The class file, together with a guide, PSP2egui.tex, and sample pages, PSP2esam.tex, can be downloaded from ftp://ftp.cambridge.org/pub/texarchive/journals/latex/psp-cls in either packed or unpacked form. These files will be updated periodically: please ensure that you have the latest version.

A cover page should give the title, the author's name and institution, with the address to which mail should be sent.

The title, while brief, must be informative (e.g. A new proof of the prime-number theorem, whereas, Some applications of a theorem of G.H. Hardy would be useless).

Authors are asked to provide an abstract as a basis for search on the Web. This may be an explicit abstract at the start of the paper. Otherwise the first paragraph or two should form a summary of the main theme of the paper, providing an abstract intelligible to mathematicians. Please note that the abstract should be able to be read independently of the main text. References should therefore not be included in the abstract.

Authors are encouraged to check that where references are given, they are used in the text. Experience has shown that unused references have a habit of surviving into the final version of the manuscript.

For a typescript to be accepted for publication, it must accord with the standard requirements of publishers, and be presented in a form in which the author's intentions regarding symbols etc. are clear to a printer (who is not a mathematician). Please also check the Cambridge University Press website for information about the style in which the paper should be submitted.

#### 2. Notation

Notation should be chosen carefully so that mathematical operations are expressed with all possible neatness, to lighten the task of the compositor and to reduce the chance of error. For instance  $n \, \operatorname{sub} k$  is common usage, but avoid if possible using  $c \, \operatorname{sub} n \, \operatorname{sub} k$ . Fractions are generally best expressed by a solidus. Complicated exponentials like:

should be shown in this and no other way.

#### $\exp\{z^2\sin\theta/(1+y^2)\}$

It helps if displayed equations or statements which will be quoted later are numbered in order on the right of their line. They can then be referred to by, for example 'from (7)'.

The author must enable the printer (if necessary by pencilled notes in the margin) to distinguish between similar symbols such as  $o, O, o, O, 0; x, X, x; \phi, \Phi, \emptyset; l, 1; e,k, \kappa,k$ .

Footnotes should be avoided.

Please use typewriter font for all addresses and email addresses.

Omit  $\square$  from the end of proofs.

In listing assertions, conclusions, etc. do not use a vertical column of dots and do not follow (a) or (i) by a capital letter (eg. (i) the absolute value  $\ldots$ )

In making references precise use [3, theorem 5.1]

#### 3. Diagrams

Diagrams should be in black ink or from a high-quality laser printer and should not be larger than 30 cm by 45 cm. Lettering to be inserted by the printer should be shown clearly on copies of the figures rather than on the original drawings. Please note that a charge may be made if hand-drawn diagrams need to be re-drawn for publication.

#### Figure 1 here

A typed list of captions may be provided at the end of the manuscript in the following format:

#### Figure 1. A basis for ...

Note that there is no point at the end of the heading. All headings should be centred.

#### 4. Tables

Tables should be numbered (above the table) and set out on separate sheets. Indicate the position of each in the text as for figures:

#### Table 3 here

Heading for tables should be shown in the following way:

Table 1. A basis for ...

Note that there is no point at the end of the heading. All headings should be centred over columns.

#### 5. References

References should be collected at the end of the paper numbered in alphabetical order of the authors' names. Where references are given, they should be used in the text. Titles of journals should be abbreviated as in *Mathematical Reviews*. The following examples show the preferred style for references to a paper in a journal, a paper in a proceedings volume, a book and an unpublished dissertation:

[1] J. F. ADAMS. On the non-existence of elements of Hopf invariant one. Ann of Math. (2) 72 (1960), 20-104.

[2] M. P. FOURAM and D. S. SCOTT. Sheaves and logic. In Applications of Sheaves Lecture Notes in Math. vol. 753 (Springer-Verlag, 1979), pp. 302-401.

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

[4] F. W. LAWVERE. Functional semantics of algebraic theories. PhD. thesis. Columbia University (1963).

#### 6. Submission of papers accepted for publication

When a paper has been accepted for publication the relevant TeX files of the final version, accompanied by a pdf file, should be sent to the Editor by e-mail.

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.

# MATHEMATICAL PROCEEDINGS

## of the

Cambridge Philosophical Society

VOLUME 161 PART 3, pages 381-568, November 2016

### CONTENTS

COHEN, F. R. & STAFA, M. On spaces of commuting elements in Lie groups	. 381
MATAR, A. Selmer Groups and Anticyclotomic $Z_p$ -extensions	. 409
Shmerkin, P. & Solomyak, B. Absolute continuity of complex Ber	
convolutions	. 435
KRYŃSKI, W. Webs and the Plebański equation	. 455
WEINGARTNER, A. On the degrees of polynomial divisors over finite fields	. 469
HOUDAYER, C. & UEDA, Y. Asymptotic structure of free product von Neumann alge	oras. 489
MEHRDAD, B. & ZHU, L. Limit Theorems for Empirical Density of Gre	itest
Common Divisors	. 517
RAEBURN, I. Deformations of Fell bundles and twisted graph algebras	. 535
LIECHTI, L. Positive braid knots of maximal topological 4-genus	. 559

© The Cambridge Philosophical Society 2016

Cambridge Journals Online For further information about this journal please go to the journal website at: journals.cambridge.org/psp



MIX Paper from responsible sources FSC<sup>®</sup> C007785

