

VOLUME 41 (SERIES II) PART 3
OCTOBER 1998

ISSN 0013 0915

Proceedings
of the
Edinburgh
Mathematical
Society

OXFORD UNIVERSITY PRESS

PROCEEDINGS

OF THE

EDINBURGH MATHEMATICAL SOCIETY

EDITORIAL BOARD

C. M. CAMPBELL (Managing Editor)

A. M. ETHERIDGE (Stochastic Analysis)

L. O'CARROLL (Algebra)

S. C. POWER (Analysis)

B. STRAUGHAN (Applied Mathematics)

C. MACLACHLAN (Topology)

R. W. K. ODONI (Number Theory)

D.M. SLOAN (Numerical Analysis)

I. TWEDDLE (Reviews Editor)

CONSULTING EDITORS

K. R. DAVIDSON

University of Waterloo

D. MCDUFF

SUNY at Stony Brook

W. D. NEUMANN

University of Melbourne

M. J. D. POWELL

University of Cambridge

C. A. STUART

Swiss Federal Institute of Technology, Lausanne

K. R. GOODEARL

University of California, Santa Barbara

A. J. MACINTYRE

University of Oxford

G. PISIER

Universite Paris VI

C. E. PRAEGER

University of Western Australia

D. ZAGIER

Max-Planck-Institut für Mathematik, Bonn

Frequency One volume of the *Proceedings of the Edinburgh Mathematical Society* is published annually, consisting of three issues in February, June and October.

Subscriptions The subscription rates for 1998 are: £105 in the UK and Europe, and US\$210 in the rest of the world. These prices include air-speeded delivery to Australia, Canada, India, Japan, New Zealand, and the USA. Delivery elsewhere is by surface post, although airmail rates can be quoted on request.

Payment is required with all orders and may be made by the following methods:

Cheque (made payable to Oxford University Press)

National Girobank (account 500 1056)

Credit cards (Access, Visa, American Express, Diners Club)

UNESCO Coupons.

Bankers: Barclays Bank plc, PO Box 333, Oxford, UK Code 20-65-18, Account 00715654.

Requests for sample copies, subscription enquiries, orders and changes of address should be sent to the Journals Subscription Department, Oxford University Press, Walton Street, Oxford OX2 6DP, UK.

Back numbers Copies of the current volume and the two immediately preceding volumes can be obtained from Oxford University Press at the above address. Earlier volumes in Series II (from Volume 15 onwards) can be obtained from William Dawson and Sons, Cannon House, Park Farm Road, Folkestone, Kent, CT19 5EE, UK.

Series I comprised forty-four volumes published from 1884 to 1926. Enquiries regarding back numbers of Series I and Volumes 1-14 of Series II should be addressed to Kraus Reprint Ltd., Route 100, Millwood, NY 10546, USA.

COPYRIGHT © 1998 THE EDINBURGH MATHEMATICAL SOCIETY

All rights reserved; no part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise without either the prior written permission of the Publishers, or a licence permitting restricted copying issued in the UK by the Copyright Licensing Agency Ltd, 90 Tottenham Court Road, London, W1P 9HE, or in the USA by the Copyright Clearance Center, 27 Congress Street, Salem, Mass 01970.

Published by Oxford University Press, Walton Street, Oxford, OX2 6DP, UK.

Web address: <http://www.oup.co.uk/edmath/>

Printed in Great Britain by Bell and Bain Ltd., Glasgow

PROCEEDINGS
OF THE
EDINBURGH MATHEMATICAL SOCIETY

EDITED BY

C. M. CAMPBELL	A. M. ETHERIDGE
C. MACLACHLAN	L. O'CARROLL
R. W. K. ODoni	S. C. POWER
D. M. SLOAN	B. STRAUGHAN
I. TWEDDLE	

CONSULTING EDITORS

K. R. DAVIDSON	K. R. GOODEARL
D. MCDUFF	A. J. MACINTYRE
W. D. NEUMANN	G. PISIER
M. J. D. POWELL	C. E. PRAEGER
C. A. STUART	D. ZAGIER

VOLUME 41 (SERIES II)
1998

OXFORD UNIVERSITY PRESS

COPYRIGHT © 1998 THE EDINBURGH MATHEMATICAL SOCIETY

Printed in Great Britain by
Bell and Bain Ltd, Glasgow

CONTENTS

	<i>Page</i>
R. AYALA AND A. QUINTERO On the Ganea strong category in proper homotopy	247
A. BALLESTER-BOLINCHES, M. C. PEDRAZA-AGUILERA AND M. D. PÉREZ-RAMOS Finite groups which are products of pairwise totally permutable subgroups	567
DAVID BEKOLLÉ AND ALINE BONAMI Hausdorff–Young inequalities for functions in Bergman spaces on tube domains	553
M. I. BERENGUER AND A. R. VILLENA Continuity of Lie derivations on Banach algebras	625
ALINE BONAMI, see DAVID BEKOLLÉ	
BOOK REVIEWS	207, 429
PATRICK J. BROWNE A Prüfer approach to half-linear Sturm–Liouville problems	573
M. D. BUHMANN Radial functions on compact support	33
W. D. BURGESS AND K. R. FULLER The Cartan determinant and generalizations of quasihereditary rings	23
N. CHEMETOV AND J. F. RODRIGUES A class of nonlinear elliptic problems with nonconvex constraints and applications	333
D. COOPER, D. D. LONG AND A. W. REID Infinite Coxeter groups are virtually indicable	303
T. CREEDON Products of derivations	407
ALLAN P. DONSIG Algebraic orders and chordal limit algebras	465
GRAHAM ELLIS On the capability of groups	487
K. R. FULLER, see W. D. BURGESS	
D. GABORIAU, G. LEVITT AND M. LUSTIG A dendrological proof of the Scott conjecture for automorphisms of free groups	325

PEDRO A. GARCÍA-SÁNCHEZ, see J. C. ROSALES

J. GARCÍA-CUERVA, R. A. MACÍAS AND J. L. TORREA	Maximal operators and $B.M.O.$ for Banach lattices	585
F. GHAHRAMANI AND YU V. SELIVANOV	The global dimension theorem for weighted convolution algebras	393
SAY SONG GOH, S. L. LEE, ZUOWEI SHEN AND W. S. TANG	Construction of Schauder decomposition on Banach spaces of periodic functions	61
JOSÉ L. GÓMEZ PARDO AND PEDRO A. GUIL ASENSIO	On the Goldie dimension of injective modules	265
PEDRO A. GUIL ASENSIO, see JOSÉ L. GÓMEZ PARDO		
ASMA HARCHARRAS	On some 'stability' properties of the full C^* -algebra associated to the free group F_∞	93
MAURICE HASSON	Concentration of the error between a function and its polynomial of best uniform approximation	447
SHYUICHI IZUMIYA AND TAKASI SANO	Generic affine differential geometry of plane curves	315
DIMITRIOS A. KANDILAKIS AND NIKOLAOS S. PAPAGEORGIOU	Nonlinear periodic parabolic problems with nonmonotone discontinuities	117
JOHN LAWRENCE	Rank and abelian rank of systems of equations over the free group	217
S. L. LEE, see SAY SONG GOH		
JONATHAN LEECH	On the foundations of inverse monoids and inverse algebras	1
G. LEVITT, see D. GABORIAU		
D. D. LONG, see D. COOPER		
M. LUSTIG, see D. GABORIAU		
ZINAIDA A. LYKOVA	Excision in Banach simplicial and cyclic cohomology	411
R. A. MACÍAS, see J. GARCÍA-CUERVA		
R. J. MARSH	Canonical bases and standard monomials	611
XAVIER MASSANEDA	$A^{-\infty}$ -interpolation in the ball	359
TAKAHIKO NAKAZI	The spectra of Toeplitz operators with unimodular symbols	133
M. NEDELJKOV AND S. PILIPOVIC	Hypoelliptic differential operators with generalized constant coefficients	47

CONTENTS

v

WERNER GEORG NOWAK	Fractional part sums and lattice points	497
OBITUARY	Professor W. L. Edge	631
KEN'ICHI OHSHIKA	Geometrically finite Kleinian groups and parabolic elements	141
P. P. PÁLFY	The number of conjugacy classes in some quotients of the Nottingham group	369
NIKOLAOS S. PAPAGEORGIOU,	see DIMITRIOS A. KANDILAKIS	
M. C. PEDRAZA-AGUILERA,	see A. BALLESTER-BOLINCHES	
M. D. PÉREZ-RAMOS,	see A. BALLESTER-BOLINCHES	
HENRIKE PETZL AND RODNEY Y. SHARP	Comparison of graded and ungraded Cousin complexes	289
S. PILIPOVIC,	see M. NEDELJKOV	
CORNEL PINTEA	A measure of non-immersability of the Grassmann manifolds in some euclidean spaces	197
A. QUINTERO,	see R. AYALA	
A. W. REID,	see D. COOPER	
N. R. ROCCO AND P. SHUMYATSKY	On periodic groups having almost regular 2-elements	385
J. F. RODRIGUES,	see N. CHEMETOV	
J. C. ROSALES AND PEDRO A GARCÍA-SÁNCHEZ	On Cohen–Macaulay and Gorenstein simplicial affine semigroups	517
TAKASI SANO,	see SHYUICHI IZUMIYA	
MANUEL SAORÍN	Monoid gradings on algebras and the Cartan determinant conjecture	539
YU V. SELIVANOV,	see F. GHARAMANI	
RODNEY Y. SHARP,	see HENRIKE PETZL	
ZUOWEI SHEN,	see SAY SONG GOH	
TETSUTARO SHIBATA	Two-parameter nonlinear Sturm–Liouville problems	225
P. SHUMYATSKY,	see N. R. ROCCO	
KIRBY C. SMITH AND LEON VAN WYK	Generalized blocked triangular matrix rings associated with finite abelian centralizer near-rings	177
W. S. TANG,	see SAY SONG GOH	
V. THARMARATINAM	Matrix d.g. near-rings	433

MARC P. THOMAS	Closed ideals in the Banach algebra $\ell^1(\omega)$ when ω is ε -star shaped	161
J. L. TORREA,	see J. GARCÍA-CUERVA	
EDWARD C. TURNER AND DANIEL A. VOCE	Tame automorphisms of finitely generated abelian groups	277
LEON VAN WYK,	see KIRBY C. SMITH	
A. R. VILLENA,	see M. I. BERENQUER	
DANIEL A. VOCE,	see EDWARD C. TURNER	