PROCEEDINGS
OF THE
EDINBURGH MATHEMATICAL SOCIETY

https://doi.org/10.1017/S0013091500026481 Published online by Cambridge University Press

PROCEEDINGS

OF THE

EDINBURGH MATHEMATICAL SOCIETY

EDITED BY

T. S. BLYTH F. F. BONSALL
R. M. DICKER A. G. MACKIE
A. D. SANDS I. N. SNEDDON
A. M. SINCLAIR

VOLUME 20 (SERIES II)
1976-1977

SCOTTISH ACADEMIC PRESS

https://doi.org/10.1017/S0013091500026481 Published online by Cambridge University Press

COPYRIGHT © 1976 THE EDINBURGH MATHEMATICAL SOCIETY

PRINTED IN GREAT BRITAIN BY
T. & A. CONSTABLE LTD., EDINBURGH

https://doi.org/10.1017/S0013091500026481 Published online by Cambridge University Press

CONTENTS

PAGE

ABRAHAM, VICTOR M. A note on train algebras 53

ARRELL, DAVID G. On groups which are residually $\mathscr{X}$-commutative 7

BARRIGA, OSCAR E. On a problem about cyclic subgroups of finite groups 225

BASTON, V. J. Some inequalities involving the symmetric functions 199

BEETHAM, M. J. AND CAMPBELL, C. M. A note on the Todd-Coxeter coset enumeration algorithm 73

BOOK REVIEWS 265, 361

BRUNNER, A. M. On groups of Fibonacci type 211

BUNDER, M. W. Commutative non-associative number theory 133

CHENEY, C. A. AND KORVIN, ANDRE DE. The representation of linear operators on spaces of finitely additive set functions 233

COLTON, DAVID. An inverse scattering problem for acoustic waves in a spherically stratified medium 257

COOPER, FRANCES. A Harnack inequality for degenerate elliptic equations on minimal surfaces 29

DALES, H. G. Exponentiation in Banach star algebras 163

DIXON, P. G. A characterisation of closed subalgebras of $\mathscr{B}(H)$ 215

DOWSON, H. R. On power-bounded prespectral operators 173

FOUNTAIN, JOHN. Perfect semigroups 87

FRASER, GRANT A. The tensor product of distributive lattices 121

FRASER, GRANT A. The tensor product of distributive lattices II 355

GILLESPIE, T. A. Commuting well-bounded operators on Hilbert spaces 167

GINGOLD, H. A summability method due to linear differential equations and a uniqueness property of solutions of singular differential equations 41

HOGGAR, S. G. New sets of equi-isoclinic n-planes from old 287

HOUH, CHORNG-SHI. A note on pseudo-umbilical surfaces 137

https://doi.org/10.1017/S0013091500026481 Published online by Cambridge University Press

PAGE

HUMPHREYS, J. F. Finite p-soluble groups with irreducible modular representations of given degrees 219

HUMPHREYS, J. F. Generator conditions on the fitting subgroup of a polycyclic group 273

ISBELL, JOHN. Perfect categories 95

KALTON, N. J. Linear operators whose domain is locally convex 293

KEATES, M. The number of primes representable as the sum of two square-free squares 23

LAFFEY, THOMAS J. Disjoint conjugates of cyclic subgroups of finite groups 229

LENAGAN, T. H. Krull dimension and invertible ideals in Noetherian rings 81

LILLINGTON, J. N. Geometric inequalities involving the stretch of a set 243

LUDVIK, P. M. On a singular measure of D. M. Connolly and J. H. Williamson 59

MACNAB, D. S. Some applications of double-negation sheafification 279

O'CARROLL, L. Strongly E-reflexive inverse semigroups 339

OPROIU, V. Some non-embedding theorems for the Grassmann manifolds $G_{2\,n}$ and $G_{3\,n}$ 177

OSWALD, A. Completely reducible near-rings 187

OSWALD, A. Conditions on near-rings which imply that nil N-subgroups are nilpotent 301

PATHAK, R. S. A distributional generalised Stieltjes transformation 15

PIGNO, LOUIS. Approximations to the norm of the singular part of a measure 69

POPOOLA, J. O. AND TWEDDLE, I. A variant of separability in dual systems 317

RILEY, N. A note on "simplification and scaling" 63

ROBERTSON, GUYAN. On the density of the invertible group in C^*-algebras 153

ROSSA, R. F. AND TANGEMAN, R. L. General heredity for radical theory 333

RUBEL, L. A. AND SHIELDS, A. L. Badly approximable functions and interpolation by Blaschke products 159

SHARP, RODNEY Y. Secondary representations for injective modules over commutative Noetherian rings 143

https://doi.org/10.1017/S0013091500026481 Published online by Cambridge University Press

PAGE

TULLO, ALLAN W. Conditions on Banach algebras which imply finite dimensionality 1

VALDIVIA, MANUEL. Nuclearity and Banach spaces 205

VAUGHAN, R. C. On the order of magnitude of Jacobsthal's function 329

WEINERT, HANNS JOACHIM. Related representation theorems for rings, semi-rings, near-rings and semi-near-rings by partial transformations and partial endomorphisms 307

YOUNG, N. J. Periodicity of functionals and representations of normed algebras on reflexive spaces 99

https://doi.org/10.1017/S0013091500026481 Published online by Cambridge University Press

The Foundations of Mathematics

Ian Stewart and David Tall

This is a book for readers in transition from 'school mathematics' to the fully fledged type of thinking used by professional mathematicians. It should prove useful to first-year students in universities, polytechnics, and colleges, and to sixth formers contemplating further study. £7.50
paper covers £3.95

Graph Theory 1736-1936

Norman Biggs, E. Keith Lloyd, and Robin J. Wilson

'It is always best to read the original words of the masters, but this is rarely easy. The authors are to be thanked for making these reflections available. But their book is more than an excellent selection of readings. The historical commentary exposes many popular errors and should be instrumental in correcting them. It gives the historical facts in a fluent and readable style. The commentary also ties the selections together pedagogically, making the book suitable as an introductory or supplementary text.' *The Times Higher Education Supplement* £9.50

Mathematical Cosmology

An Introduction

Peter T. Landsberg and David A. Evans

Cosmology is a subject of much scientific and philosophical interest, but accounts are usually either non-mathematical or fully relativistic. This book gives readers a quantitative understanding of some important aspects of general relativistic cosmology, starting only with school mathematics and Newtonian ideas in physics. It is concerned mainly with various models that have been proposed to explain the large-scale structure of the universe: the Friedmann models, steady-state models, and model universes involving pressure. £6.95

Modern Numerical Methods for Ordinary Differential Equations

Edited by G. Hall and J. M. Watt

Based on a Liverpool-Manchester Summer School held in July 1975, this book gives practitioners of numerical methods in industry, research establishments, and tertiary education, a theoretical and practical account of the state of the art. Emphasis is placed on the description of the best available algorithms, together with comparisons and recommendations. £9.75

Oxford University Press

https://doi.org/10.1017/S0013091500026481 Published online by Cambridge University Press