PROCEEDINGS of the EDINBURGH MATHEMATICAL SOCIETY

https://doi.org/10.1017/S0013091500004338 Published online by Cambridge University Press

PROCEEDINGS

OF THE

EDINBURGH MATHEMATICAL SOCIETY

EDITED BY

T. S. BLYTH J. R. HUBBUCK A. M. SINCLAIR R. M. DICKER C. J. SHADDOCK I. N. SNEDDON

VOLUME 26 (SERIES II) 1983

SCOTTISH ACADEMIC PRESS

COPYRIGHT © 1983 THE EDINBURGH MATHEMATICAL SOCIETY

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

CONTENTS

PAGE

M. F. ATIYAH Angular momentum, convex polyhedra and algebraic geometry	121
P. J. BARRAT AND C. FRASER Some bifurcation problems in cholesteric liquid crystal theory	319
R. BEAZER Lattices whose ideal lattice is Stone	107
GERALD BEER In which metric spaces are parallel bodies of closed sets closed?	265
BOOK REVIEWS 113, 383	, 395
BOOKS RECEIVED 120	, 288
J. W. BRUCE The duals of generic space curves and complete intersections	259
L. J. BUNCE On compact action in JB-algebras	353
R. J. COOK Pairs of additive equations III: quintic equations	191
E. R. COWIE A note on uniquely maximal Banach spaces	85
L. DREWNOWSKI Semi-embeddings of Banach spaces which are hereditarily c_0	163
SHALOM FEIGELSTOCK AND AARON KLEIN Functorial radicals and non-abelian torsion II	1
YASUKUNI FURUKAWA Whitehead products in the complex Stiefel manifolds	241
JOSÉ E. GALÉ Unitary representations corresponding to measures with bounded support in infinite dimensions	67
F. GHAHRAMANI Isomorphisms between radical weighted convolution algebras	343
T. E. HALL AND P. R. JONES Epis are onto for finite regular semigroups	151
J. B. HICKEY Semigroups under a sandwich operation	371
MICHAEL HOLCOMBE The syntactic near-ring of a linear sequential machine	15
JAMES HOWIE The solution of length three equations over groups	89
KRZYSZTOF JAROSZ Metric and algebraic perturbations of function algebras	383
ELGIN H. JOHNSTON The mean value theorem and analytic functions	289
N. J. KALTON Isomorphisms between spaces of vector-valued continuous functions	29
RONALD A. KNIGHT Zubov's condition revisited	253
STANLEY O. KOCHMAN An algebraic filtration of $H_*(MO; \mathbb{Z}_2)$	313
CZES KOSNIOWSKI AND MAHGOUB YAHIA Unitary bordism and circle actions	97
JOHN C. LENNOX On quasinormal subgroups of certain finitely generated groups	25
PHILIP A. LEONARD AND KENNETH S. WILLIAMS On the divisibility of the class number of $Q(\sqrt{-pq})$ by 16	221
J. S. LOWNDES Cauchy problems for second order hyperbolic differential equations with constant coefficients	307

CONTENTS

Obituary GEOFFREY TIMMS, O.B.E., Ph.D., F.R.S.E.

equation

R. A. RANKIN The first hundred years (1883–1983)

S. VELDSMAN On Brown-McCoy radical classes in categories

D. B. MCALISTER AND R. MCFADDEN Maximum idempotents in naturally ordered regular semigroups I. D. MACDONALD Finite *p*-groups with unique maximal classes K. D. MAGILL, JR. The partially ordered family of all \mathcal{R} -classes of S(x)K. D. MAGILL, JR., P. R. MISRA AND U. B. TEWARI Automorphism groups of laminated near-rings determined by complex polynomials K. D. MAGILL, JR., P. R. MISRA AND U. B. TEWARI Finite automorphism groups of laminated near-rings ZOLTAN MAGYAR A sharpening of the Berkson-Glickfeld theorem SUBRATA MAJUMDAR Free resolutions for certain classes of groups J. D. P. MELDRUM Upper faithful d.g. near-rings SIDNEY A. MORRIS AND VINCENT C. PECK A note on homeomorphic measures on topological groups BRANKO NAJMAN Eigenvalues of the Klein-Gordon equation BERNT ØKSENDAL A stochastic proof of an extension of a theorem of Rado Obituary F. E. BATH, O.B.E., Ph.D., F.R.S.E.

R. J. WEINACHT A singular perturbation problem for the Lavrent'ev-Bitsadze

PAGE

213

233

7

73

297

275

173

361

169

181

333 279

393

135 337

49

SCOTTISH ACADEMIC PRESS

Texts in Mathematics

Edited by Professor W. N. Everitt of the University of Dundee and Professor A. Jeffrey of the University of Newcastle upon Tyne.

A series designed for mathematical students in their final year, postgraduate students and research workers.

THE SPECTRAL THEORY OF PERIODIC DIFFERENTIAL EQUATIONS

M. S. P. Eastham

Reader in Mathematical Analysis, University of London

The text is the first connected account of a body of results, relating in particular to eigenvalue and spectral theory, which has been developed in the Mathematical Journals over the past twenty years. "The book can be strongly recommended to mathematicians and

physicists at post-graduate level who want to reach a well-worked yet little-known frontier."

Times Higher Education Supplement

144 pp. £5.00

ANALYTICAL METHODS OF OPTIMIZATION

D. F. Lawden

University of Aston in Birmingham

The scope of this book is essentially that of the classical theory of the calculus of variations, cast into a form which is most suitable for application to modern problems of optimizing the behaviour of engineering systems. All methods and principles are illustrated by worked problems, and there are sets of exercises at the end of each chapter. The book is suitable for final year applied mathematicians and for use as a text by all post-graduate students making a special study of systems theory. 164 pp. ± 5.50

THEORY AND APPLICATION OF THE BOLTZMANN EQUATION

Carlo Cercignani

Institute of Mathematics, The Polytechnic of Milan

The book presents a unified approach to recent developments in the fields of electron transport in plasmas; neutron transport in solids and plasmas, and in nuclear reactors; phonon transports in superfluids and radiative transfer in planetary and stellar atmospheres. The main line of exposition is tied to the classical equation established by Boltzmann which still forms the basis for the kinetic theory of gases.

432 pp. £15.00