

PROCEEDINGS

OF THE

EDINBURGH MATHEMATICAL SOCIETY

CONTENTS

G. U. GARBA: Nilpotents in semigroups of partial order-preserving transformations	<i>page 361</i>
NEIL HINDMAN AND DONA STRAUSS: Cancellation in the Stone-Čech compactification of a discrete semigroup	<i>page 379</i>
E. KISSIN AND V. S. SHULMAN: Differential properties of some dense subalgebras of C^* -algebras	<i>page 399</i>
I. M. CHISWELL: Properly discontinuous actions on Λ -trees	<i>page 423</i>
SUDESH K. KHANDUJA: On value groups and residue fields of some valued function fields	<i>page 445</i>
JONATHAN A. HILLMAN: Minimal 4-manifolds for groups of cohomological dimension 2	<i>page 455</i>
HENRIQUE GUZZO JR: Embedding nil algebras in train algebras	<i>page 463</i>
I. LEVI AND R. B. McFADDEN: S_n -normal semigroups	<i>page 471</i>
T. J. HODGES AND M. P. HOLLAND: Chern characters, reduced ranks and \mathcal{D} -modules on the flag variety	<i>page 477</i>
GEOFFREY V. WOOD: Inequalities in l_1 and l_p and applications to group algebras	<i>page 483</i>
W. LAMB AND S. E. SCHIAVONE: Mellin multipliers and radially symmetric Riesz potentials	<i>page 493</i>
YASUSHI NINOMIYA: Nilpotency indices of the radicals of p -group algebras	<i>page 509</i>
JESÚS LALIENA: Corrigendum et addendum: the Frattini subalgebra of a Bernstein algebra	<i>page 519</i>
G. J. O. JAMESON: A specific form of Grothendieck's inequality for the two-dimensional case, with applications to C^* -algebras	<i>page 521</i>
JOHN MEIER: The topology of graph products of groups	<i>page 539</i>
BOOK REVIEW	<i>page 545</i>

OXFORD UNIVERSITY PRESS

PROCEEDINGS

OF THE

EDINBURGH MATHEMATICAL SOCIETY

EDITORIAL BOARD

C. M. CAMPBELL (Managing Editor)

K. A. BROWN (Algebra)

T. N. T. GOODMAN (Approximation Theory)

A. A. LACEY (Applied analysis)

S. D. COHEN (Number theory)

J. HOWIE (Topology)

S. C. POWER (Analysis)

C. J. SHADDOCK (Reviews Editor)

CONSULTING EDITORS

Sir MICHAEL ATIYAH, P.R.S.
University of Cambridge

C. DE BOOR
University of Wisconsin-Madison

O. H. KEGEL
Albert-Ludwigs-Universität, Freiburg

D. S. PASSMAN
University of Wisconsin-Madison

G. P. SCOTT
Massachusetts Institute of Technology

P. J. BROWNE
University of Saskatchewan

P. J. HOLMES
Cornell University

H. W. LENSTRA
University of California, Berkeley

A. PELCZYNSKI
Polish Academy of Sciences

L. C. TARTAR
Carnegie-Mellon University

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 1994 are: £79 in the U.K. and Europe, and U.S.\$169 in the rest of the world. These prices include air-speeded delivery to Australia, Canada, India, Japan, New Zealand, and the U.S.A. Delivery elsewhere is by surface post, although airmail rates can be quoted on request.

Payment is required with all order 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. P.O. Box 333, Oxford, U.K. 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, U.K.

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 on Series II (from Volume 15 onwards) can be obtained from William Dawson and Sons, Cannon House, Park Farm Road, Folkestone, Kent, CT19 5EE, U.K.

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, U.S.A.

COPYRIGHT © 1994 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 U.K. by the Copyright Licensing Agency Ltd, 90 Tottenham Court Road, London, W1P 9HE, or in the U.S.A. by the Copyright Clearance Center 27, Congress Street, Salem, Mass 01970.

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

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