PROCEEDINGS

OF THE

EDINBURGH MATHEMATICAL SOCIETY

CONTENTS

ELGIN H. JOHNSTON: The mean value theorem and analytical functions	page 289
K. D. MAGILL, JR., P. R. MISRA AND U. B. TEWARI: Finite automorphism groups of laminated near-rings	page 297
J. S. LOWNDES: Cauchy problems for second order hyperbolic differential equations with constant coefficients	page 307
STANLEY O. KOCHMAN: An algebraic filtration of H_* (MO; \mathbb{Z}_2)	page 313
P. J. BARRATT AND C. FRASER: Some bifurcation problems in cholesteric liquid crystal theory	page 319
BERNT ØKSENDAL: A stochastic proof of an extension of a theorem of Rado	page 333
s. VELDSMAN: On Brown-McCoy radical classes in categories	page 337
F. GHAHRAMANI: Isomorphisms between radical weighted convolution algebras	page 343
L. J. BUNCE: On compact action in JB-algebras	page 353
J. D. P. MELDRUM: Upper faithful d.g. near-rings	page 361
J. B. HICKEY: Semigroups under a sandwich operation	page 371
KRZYSZTOF JAROSZ: Metric and algebraic perturbations of function algebras	page 383
Obituary: GEOFFREY TIMMS, O.B.E., Ph.D., F.R.S.E.	page 393
BOOK REVIEWS	page 395

SCOTTISH ACADEMIC PRESS

THE EDINBURGH MATHEMATICAL SOCIETY

The Edinburgh Mathematical Society was instituted in 1883 for "the promotion and extension of Mathematical Science, Pure and Applied".

Nominations for Ordinary Membership are received at any one Ordinary Meeting and voted upon at the next. Members receive notices of all meetings and may subscribe to the Proceedings at a reduced rate. Further information about membership can be obtained from the Secretary.

PROCEEDINGS OF THE EDINBURGH MATHEMATICAL SOCIETY

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

The Society's Proceedings, containing papers embodying the results of research that is original in matter or manner, are published in parts. Three parts complete a volume. One volume is issued each year. Series I comprised forty-four volumes published from 1886 to 1926. Series II commenced in 1927.

Papers to be considered for publication should be sent to the Secretary. Manuscripts (2 copies) should be typewritten on A4 paper with double spacing and generous margins. The style and arrangement should conform to current practice in the Proceedings. References, including titles of papers, should be given in the form adopted by Mathematical Reviews, footnotes being avoided if possible. Figures should be separated from the text and lettered, ready for photographic reduction; their intended location should be clearly indicated. Manuscripts which are not suitable for submission to the printer will not be accepted. Authors are advised to retain a copy of any material submitted, as the Society cannot accept responsibility for any loss.

A proof is supplied once. Authors are particularly requested to correct and return the proof promptly. Excessive corrections may be charged to authors. Fifty free offprints, and additional copies at cost, will be supplied if ordered on a form returned with the proof.

The Proceedings are published at the price of £3000 (\$75) for a volume of three parts.

Enquiries regarding purchase of back numbers should be addressed to

Kraus Reprint Ltd. Route 100 Millwood N.Y. 10546 U.S.A.

for volumes of Series I and up to Volume 14 of Series II, and to the publishers

Scottish Academic Press Ltd. 33 Montgomery Street Edinburgh EH7 5JX

for subsequent issues.

The Society's address is

The Edinburgh Mathematical Society James Clerk Maxwell Building The King's Buildings Edinburgh EH9 3JZ

Communications concerning the Library should be addressed to the Librarian.

All other correspondence should be addressed to the Secretary.

COPYRIGHT (* 1983 THE EDINBURGH MATHEMATICAL SOCIETY

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