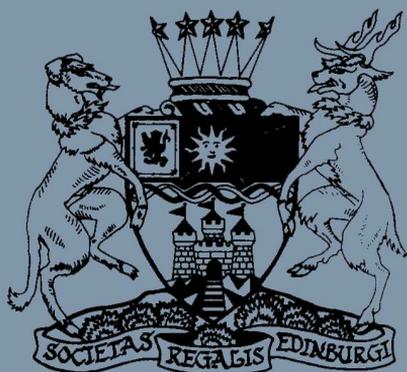


PEAMDU 114 (1–159) 1990

Volume 114: Parts 1/2

THE ROYAL SOCIETY OF EDINBURGH



PROCEEDINGS

Section **A** (Mathematics)

ISSN 0308–2105

PUBLISHED BY THE ROYAL SOCIETY OF EDINBURGH
22 GEORGE STREET, EDINBURGH, EH2 2PQ

1990

EDITORIAL BOARD

Executive Editors

J. M. BALL

Heriot-Watt University

A. M. DAVIE

University of Edinburgh

J. R. HUBBUCK

University of Aberdeen

M. F. ATIYAH
University of Oxford

J. CARR
Heriot-Watt University

R. FLETCHER
University of Dundee

T. A. GILLESPIE
University of Edinburgh

J. M. HOWIE
University of St Andrews

T. J. LYONS
University of Edinburgh

R. W. OGDEN
University of Glasgow

O. PENROSE
Heriot-Watt University

J. R. RINGROSE
University of Newcastle
upon Tyne

B. D. SLEEMAN
University of Dundee

C. D. WATERSTON

General Secretary

Royal Society of Edinburgh

W. DUNCAN

Executive Secretary

Royal Society of Edinburgh

Consulting Editors

H. BREZIS
Université de Paris VI

C. M. DAFERMOS
Brown University,
Providence, RI, USA

R. G. DOUGLAS
State University of New York at
Stony Brook, USA

L. E. FRAENKEL
University of Bath

M. GIAQUINTA
Università degli
Studi di Firenze

J. K. HALE
Georgia Institute of Technology,
USA

K. KIRCHGASSNER
Universität Stuttgart

ROBERT V. KOHN
New York University

P. L. LIONS
Université de Paris IX

D. S. PASSMAN
University of Wisconsin-
Madison

W. G. STRANG
Massachusetts Institute of
Technology, Cambridge, USA

C. A. STUART
École Polytechnique Fédérale
de Lausanne

L. TARTAR
Carnegie-Mellon University,
Pittsburgh, USA

J. TOLAND
University of Bath

N. S. TRUDINGER
Australian National University,
Canberra, Australia

G. Q. ZHANG
Peking University, Beijing

Publications Manager, Royal Society of Edinburgh: T. G. Dart

The Royal Society of Edinburgh Proceedings Section A Mathematics is published every two months by the Royal Society of Edinburgh. Subscription price is \$285.00 for six issues (3 volumes). Second Class postage pending at Rahway N.J., Postmaster send address corrections to *The Royal Society of Edinburgh Proceedings Section A Mathematics*, c/o Mercury Airfreight International Ltd Inc., 2323 Randolph Avenue, Avenel, New Jersey 07001, U.S.A.

(Issued 20 April 1990)