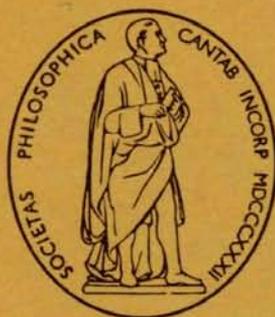


MATHEMATICAL PROCEEDINGS

*of the
Cambridge Philosophical Society*

VOLUME 116 PART 3

November 1994



CAMBRIDGE UNIVERSITY PRESS

CAMBRIDGE PHILOSOPHICAL SOCIETY

FOUNDED 1819; ROYAL CHARTER 1832

1994

President: P. P. G. BATESON
Vice-Presidents: D. HUSAIN, D. G. CRIGHTON, R. M. LYNDEN-BELL
Treasurer: C. N. KENNEY
Secretaries: (Physical) S. KENDERDINE (Biological) J. D. MOLLON
(Mathematical) G. R. GRIMMETT

The Society publishes *Mathematical Proceedings* (until 1975 entitled *Proceedings*) and *Biological Reviews*. The publication of *Transactions* was suspended at the end of Volume XXIII.

Orders, which must be accompanied by payment, may be sent to any bookseller or subscription agent or direct to the publisher: Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 2RU, or in the USA, Canada and Mexico, Cambridge University Press, Journals Department, 40 West 20th Street, New York, NY 10011-4211. Japanese prices for institutions (including ASP delivery) are available from Kinokuniya Company Ltd, P.O. Box 55, Chitose, Tokyo. Second-class postage paid at New York, NY, and at additional mailing offices. POSTMASTER: send address changes in USA, Canada and Mexico to *Mathematical Proceedings*, Cambridge University Press, 110 Midland Avenue, Port Chester, New York, NY 10573-9864.

Fellows of the Society are particularly requested to inform the Secretaries of any change of postal address and to send their subscriptions to the Treasurer, at the Society's office.

Correspondence about library exchanges should be sent to the Librarian at the Society's office.

Back numbers of *Mathematical Proceedings* and *Biological Reviews* may be obtained from the CAMBRIDGE PHILOSOPHICAL SOCIETY, BENET STREET, CAMBRIDGE CB2 3PY, ENGLAND. All parts of *Mathematical Proceedings* (including indices to Vols. 1-50, 51-60, 61-70, 71-80, 81-90, 91-100 and 101-110) and of *Biological Reviews* are available. Prices will be quoted on application.

Some parts of *Transactions* are available from the above address. The complete set on microfilm may be obtained from Microfilm Division, E.P. Group of Companies, Bradford Road, East Ardsley, Wakefield, Yorkshire, price £77.

MATHEMATICAL PROCEEDINGS

of the

CAMBRIDGE PHILOSOPHICAL SOCIETY

edited by J. E. ROSEBLADE in conjunction with

| | | |
|--------------------|--------------------|-----------------|
| SIR MICHAEL ATIYAH | J. M. E. HYLAND | G. B. SEGAL |
| T. K. CARNE | W. B. R. LICKORISH | C. B. THOMAS |
| D. G. CRIGHTON | N. G. LLOYD | J. S. WILSON |
| P. GODDARD | T. J. RANSFORD | P. M. H. WILSON |

1. *Mathematical Proceedings* (ISSN 0305-0041) is published six times a year in January, March, May, July, September and November. Two volumes of three parts are published each year. The subscription price (excluding VAT) (which includes second-class postage) of volumes 115 and 116 (1994) is £88.50 net per volume (US \$178.50 in the USA, Canada and Mexico). EU subscribers (outside the UK) who are not registered for VAT should add VAT at their country's rate. VAT registered subscribers should provide their VAT registration number.

2. *Scope of the Mathematical Proceedings.* Papers which advance knowledge of mathematics, either pure or applied, will be considered by the Editorial Committee. The work must be original and not submitted to another journal. Papers should be sent to the Editor, *Mathematical Proceedings*, Cambridge Philosophical Society, Bene't Street, Cambridge CB2 3PY, England. *Papers in languages other than English should be sent only after prior consultation with the Editor.*

3. *Correction of proofs.* If a paper is accepted, the author will receive in due course page proofs for him to correct and return within one week. To minimize disturbance of type, when words or phrases are added in proof, others of equal length should be removed if possible.

If many corrections are made in the proofs, the Council reserves the right to charge the cost.

4. Authors receive 60 free offprints, without covers, and may obtain more on payment. An order form is sent with the proofs.

© Cambridge Philosophical Society, 1994.

Copying. This journal is registered with the Copyright Clearance Center, 222 Rosewood Drive, Danvers, Mass. 01923. Organizations in the USA who are also registered with CCC may therefore copy material (beyond the limits permitted by sections 107 and 108 of US copyright law) subject to payment to CCC of the per-copy fee of \$5.00. Code 0305-0041/94 \$5.00 + .00. This consent does not extend to multiple copying for promotional or commercial purposes.

Organizations authorized by the Copyright Licensing Agency may also copy material subject to the usual conditions.

ISI Tear Sheet Service, 3501 Market Street, Philadelphia, Pennsylvania 19104, USA, is authorized to supply single copies of separate articles for private use only.

For all other use, permission should be sought from Cambridge or the American Branch of Cambridge University Press.