

LMS NEWSLETTER

No. 12

August 1974

WHITEHEAD PRIZE

Professor J. F. Adams, F.R.S., was presented with the 1974 Whitehead Prize at the Society's meeting on 28 June 1974.

The Whitehead Prize is a new prize

which will normally be awarded by Council every two years. The award is restricted to mathematicians normally resident in the United Kingdom.

THE LIBRARY

The Council of the Society has been considering the arrangements for the LMS Library, and has sought ways of reducing the cost to the Society, without detriment to the objects of the Society. These, as laid down in the Charter, include the printing, publishing and distributing gratuitously, or otherwise, Proceedings and Journals and the establishing, maintaining and extending a library of books, works or manuscripts on Mathematics. The main costs to the Society are:— first, the cost of the copies of the Society's journals sent in exchange for the great majority of the periodicals received by the Library; second the minority of periodicals that are purchased; and third the cost of binding all the periodicals.

The Council has asked the Librarian to reduced the cost of the exchanges by re-negotiating, where possible, those exchange agreements that are particularly unfavourable to the Society. The Council has discussed with the authorities of University College London the 1928 agreement, whereby the Library is housed and serviced by the College, and hopes soon to conclude a new agreement. Under the new agreement the College would continue to house and service the LMS Library and would allow members to use the whole College Library (rather than just the Physical Sciences Library as at

present). The Society would be free to dispose of any back numbers duplicated by the College, but would leave other back numbers with the College.

The Society would discontinue the purchase of periodicals; the College would take over the purchase of all or nearly all the periodicals discontinued by the Society but would discontinue the purchase of duplicate copies of some important periodicals (but would continue to duplicate the LMS periodicals). The Society would no longer bind any periodicals, other than its own publications. The College would bind the more important periodicals received by the Society (about half) and would in return be granted joint ownership of the periodicals received by the Society.

The list of periodicals received by the Society is printed at the end of the 1972 List of Members. The above outline of the proposals necessarily omits many of the minor details and, indeed, it is still possible that the final agreement will be slightly different. Members are invited to send their comments on these proposals to the Librarian, Dr. D. G. Larman, Dept. of Mathematics, University College London, London WC1E 6BT as soon as possible, and in any event not later than 1 October 1974.

D. G. LARMAN

MATHEMATICAL FILMS

The films described below were shown at the Society's meeting on 28 June 1974 and can be highly recommended.

Space filling curves

16 mm. sd. col. 27 mins.

This film presents two examples of space filling curves—continuous curves passing through every point in a square. The curves are constructed graphically as limit curves, using a computer animated sequence of approximation curves. Points on the approximation curves can be seen approaching the limit points. These concepts are first illustrated on easier examples, such as a circle and a snowflake curve of infinite length. The film gives a visual introduction to the ideas of limits, as well as several examples useful in analysis and topology.

Filed on the IBM 360/67 computer.
Hire fee £4.20 (to be confirmed).

Regular Homotopies in the plane Parts I and II

Part I—16 mm. sd. col. 14 mins.

Part II—16 m. sd. col. 19 mins.

These two computer animated films describe and prove an elementary theorem on topology known as the Whitney-

Graustein Theorem: two regular curves in the plane are regularly homotopic if and only if they have the same rotation number. No previous knowledge of topology is necessary. The concepts of the theorem and its proof are explained in the films without using or requiring an understanding of calculus or algebra. The film rigorously presents its ideas and definitions in purely visual terms without the use of mathematical symbols or manipulation. Part I contains preliminary definitions and the proof that two curves which are regularly homotopic always have the same rotation number. Part II develops the ideas further and proves that any two curves with the same rotation number are regularly homotopic. These two films are intended for use together but may, if wished, be hired separately.

Filed on the PDP7 at the Educational Research Centre, M.I.T.

Hire fee: Part I £2.60; Part II £2.60 (to be confirmed).

These films are distributed on behalf of the British Universities Film Council by the Scottish Central Film Library, 16-17 Woodside Terrace, Glasgow G3 7XN.

I. M. JAMES

BERWICK PRIZE AND DE MORGAN MEDAL

Council has recently approved detailed regulations, intended for the By Laws, for the Berwick Prize and De Morgan Medal. As the time for the consideration of each award approaches, an informal summary of the main points in the regulations will appear in the Newsletter and members of the Society will be advised on the procedure for making confidential recommendations. The next occasion will be June 1975 when the award of the Junior Berwick Prize will be considered; the corresponding notice will appear in the Newsletter of January 1975. Meanwhile members may wish to be reminded briefly about these awards.

The award of the Senior Berwick Prize

is considered in the even-numbered years, the Junior Berwick Prize in the odd-numbered years. (The Junior Prize is restricted to members not over 40 years of age; Fellows of the Royal Society are not eligible for the Junior Prize). The Prize can only be awarded to members and it is in respect of a definite piece of work actually published by the Society (within a specific period of years).

The award of the De Morgan Medal is considered triennially. It is awarded to a mathematician who is normally resident in the U.K., the sole grounds for the award being the candidate's contributions to mathematics.

J. L. BRITTON

SUBSCRIPTIONS FOR THE 1974-75 SESSION

The form for these subscriptions is enclosed. Members will not doubt be pleased to note that the basic subscription and the rates for the Society's periodicals are the same as for the 1973-74 session.

Prompt payment of subscriptions would be gratefully appreciated by the Society to reduce its office-work and hence its expenses.

FUTURE MEETINGS

The next Ordinary meetings of the Society will be on 17 October, at the London School of Economics; 21 November, the Annual General Meeting, at

Bedford College, London; and 12 December, at University College, London.

J. L. BRITTON

EDITORS' NOTE

No September issue of the *Newsletter* is planned at the time of writing. The next

issue should therefore appear in October.

REFERENCES FOR RECENT LECTURES

J. F. Adams, *Algebraic Topology: a Student's Guide*, C.U.P. 1972 (L.M.S.

Lecture Notes no. 4).

CAMBRIDGE PHILOSOPHICAL SOCIETY

To emphasize that *Proceedings of the Cambridge Philosophical Society* has been for some years in fact a journal of pure and applied mathematics, the Council of the Philosophical Society have decided to change the title whilst retaining the numbering of volumes. Starting in January 1975 with volume 77, the journal will be published as

MATHEMATICAL PROCEEDINGS
of the
Cambridge Philosophical Society.

Each volume will continue to consist of three parts published at two-monthly intervals, making two volumes in each year.

Mathematical Proceedings will be edited by J. C. Burkill, in consultation with a committee of Fellows of the Society. Communications should be addressed to the Editor of Proceedings, Cambridge Philosophical Society, Bene't Street, Cambridge, CB2 3PY, England.

J. C. BURKILL