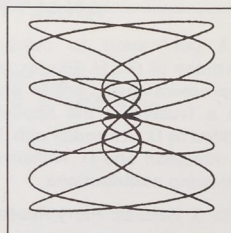


THE LONDON MATHEMATICAL SOCIETY NEWSLETTER



No. 130

June 1986

Editor: Czes Kosniowski, School of Mathematics, The University, Newcastle upon Tyne, NE1 7RU. Tel: 091-232 8511 and 091-284 4209.

Advertising: Susan Oakes, LMS Office, Burlington House, Piccadilly, London W1V 0NL. Tel: 01-437 5377.

The *Newsletter* is published monthly, except in August and September. Items for inclusion (with the exception of advertising material) should be sent to the Editor, to arrive before the tenth day of the month prior to publication. Advertisements, and general enquiries about the Society, should be addressed to Susan Oakes at the LMS Office.

Forthcoming Meetings

Friday 20 June 1986, Burlington House
(J. D. Murray, M. A. R. Koehl)

Friday 17 October 1986, Burlington House
(Meeting on Quasi-Crystals)

Friday 21 November 1986, Royal Society
(The President, J. R. Hubuck)

BOURBAKI SEMINAR

The next Nicolas Bourbaki Seminar will be at the Institut Henri Poincaré 11 rue P. et M. Curie, Paris 5e, on 14-16 June 1986.

The programme will be as follows:-
14 June 2.30 p.m.

M. Gromov - *Entropy, homology and semialgebraic geometry* (after Yomdin)

D. Robert - *Analyse semi-classique de l'effet tunnel* (d'après B. Helffer et J. Sjöstrand).

15 June 2.30 p.m.

J. Lafontaine - *Mesures de courbure des varié*

tés reimanniennes et des polyédres (d'après Cheeger-Müller-Schrader).

A. Van De Ven - *The differentiable structure of certain algebraic surfaces* (work of S. Donaldson).

16 June 2.00 p.m.

Y.-T. Siu - *Asymptotic Morse inequalities for analytic sheaf cohomology* (according to J.-P. Demailly).

J.-C. Yoccoz - *Bifonctions de points fixes elliptiques* (d'après Chenciner).

ANALYTIC AND GEOMETRIC STOCHASTICS

A publication to celebrate the sixty-fifth birthday of G.E.H. Reuter, who for many years represented the London Mathematical Society as a Trustee of the Applied Probability Trust. Edited by D. G. Kendall with the assistance of J. F. C. Kingman and D. Williams, it will contain the following contributions:

D. G. Kendall: *Harry Reuter: An appreciation*

D. J. Aldous: *Classical convergence of triangular arrays, stable laws and Schauder's fixed-point theorem.*

M. T. Barlow and S. D. Jacka: *Tracking a diffusion, and an application to weak convergence.*

N. H. Bingham: *Extensions of the strong law.*

N. J. Cutland and W. S. Kendall: *A non-standard proof of one of David Williams' splitting-time theorems.*

M. Jacobsen: *Co-optimal times and invariant measures for transient Markov chains.*

D. G. Kendall and Hui-Lin Le: *Exact shape-densities for random triangles in convex polygons.*

J. F. C. Kingman: *The construction of infinite collections of random variables with linear regressions.*

T. J. Lyons: *The critical dimension at which quasi-every Brownian path is self-avoiding.*

J. Neveu: *Erasing a branching tree.*

J. W. Pitman and M. Yor: *Some divergent integrals of Brownian motion.*

R. Pyke: *Product Brownian measures.*

L. C. G. Rogers and D. Williams: *Construction and approximation of transition matrix functions.*

Analytic and Geometric Stochastics will appear as a special issue of *Advances in Applied Probability*, and will be issued free to subscribers with Volume 18 Number 4 in December 1986. Copies can also be purchased from Applied Probability, Department of Probability and Statistics, University of Sheffield, Sheffield S3 7RH, England, price £10.00 (US\$15.00) including postage and packing.

Individual members of the London Mathematical Society may purchase one copy for their own personal use at the concessionary price of £8.50 (US\$12.75), including postage and packing, from the same address. To qualify for this price, orders should be accompanied by a remittance in favour of 'Applied Probability' and must arrive not later than 30 September 1986.

KEPLERIAN PATTERN

Further to the pattern in *LMS Newsletter* 122 and the references in 125, David Singmaster sends the following.

Kepler considers the pattern, but does not draw it, in the original Preface to the Reader in his *Mysterium Cosmographicum* of 1596. (There is a recent facsimile and translation of the later, 1621, edition by A. M. Duncan. Abaris Books, 1981). The material is on pp. 7-10 of the 2nd ed, pp. 62-69 of the Abaris edition and represents Kepler's final stage of speculation before he gets to his famous model of the heavens based on regular polyhedra and spheres.

John W. Wrench Jr., via R. P. Boas, gives the following additional reference. *School Science and Mathematics* 53 (1953) 575-576. Richard W.

Hamming; *Computers and Society*; McGraw-Hill, 1972. *Popular Computing*: No. 16 (July 1974) 11; No. 89 (Aug 1980) 20; No. 91 (Oct 1980) 19. In the last, Herman P. Robinson gives the limiting radius to 55 decimal places. If the initial inner circle has radius 1, this limiting radius is 8.70003 66252 08194 50322 24098 59113 00497 11932 97949 74289 20921 ...

In Singmaster's drawing, all the polygons have a vertex on the x-axis, which happens to be pointing downward in the printed version. The vertices next to the x-axis produce a pleasant and quite unexpected curve. Can anyone determine the curve generated by the points which are 1, 2, ... vertices away from the x-axis?

TWELFTH UNDERGRADUATE MATHEMATICS TEACHING CONFERENCE

The Twelfth Undergraduate Mathematics Teaching Conference will take place at the University of Nottingham from 16-19 September 1986.

The main themes this year will be mathematics for Computer Scientists: What Balance of Learn-

ing Activities do Mathematics Students need?; and Effective use of Micros in the Lecture Theatre.

For further information write to UMTC86, Shell Centre for Mathematical Education, University of Nottingham, Nottingham, NG7 2RD.

LONDON MATHEMATICAL SOCIETY

M. A. R. Koehl (Oxford and Berkeley)

**FOOD CAPTURE AT LOW REYNOLDS
NUMBER BY ZOOPLANKTON**

J. D. Murray (Oxford)

**PATTERN FORMATION MECHANISMS IN
BIOLOGY AND SOME APPLICATIONS**

FRIDAY, 20 JUNE, 1986, at 3.30

**Geological Society's Meeting Room,
Burlington House,
Piccadilly, London W1**

**All interested are very welcome
Tea will be served at 4.30 p.m.**

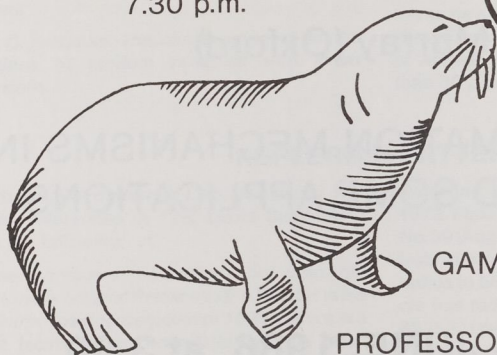
LONDON MATHEMATICAL SOCIETY

An Evening of Popular Lectures

Friday 27 June 1986: Rupert Beckett Lecture Theatre, Arts Building University of Leeds

Friday 4 July 1986: Great Hall, Sherfield Building, Imperial College Exhibition Road, London SW7

THE RISE AND FALL
OF MATRICES
PROFESSOR W LEDERMANN
7.30 p.m.



GAMES ANIMALS
PLAY
PROFESSOR J MAYNARD SMITH
9.00 p.m.

ALL INTERESTED ARE WELCOME COFFEE WILL BE SERVED AT 8.30 p.m.
The lectures are intended to be suitable for a general audience and no specific mathematical knowledge will be assumed. Although the talks are not primarily intended for professional mathematicians everyone is welcome and some members may wish to apply for tickets for friends or relatives.

Admission to the lectures will be by ticket only. Applications for the lectures on Friday 27th June at the University of Leeds should be sent to Mrs Backhouse, School of Mathematics, University of Leeds, Leeds LS2 9JT. Applications for the lectures on Friday 4 July at Imperial College, London should be sent to Miss Susan Oakes, London Mathematical Society, Burlington House, Piccadilly, London W1V 0NL. A stamped-addressed envelope would be appreciated. There is no charge for admission.

BROWNIAN MOTION AND STOCHASTIC MECHANICS

A working seminar on *Brownian motion and stochastic mechanics* is planned for the week 7-11 July, 1986 at the Dublin Institute for Advanced Studies. The following have agreed to attend: Carlen, Elworthy, Lyons, Truman, Van den Berg,

Yor. For further details write to the organisers J. T. Lewis and P. McGill at the Dublin Institute for Advanced Studies, School of Theoretical Physics, 10 Burlington Road, Dublin 4, Ireland.

RECIPROCITY AGREEMENT THE UNIONE MATEMATICA ITALIANA

The U M I - Unione Matematica Italiana - was established in 1922 for the promotion and extension of mathematical knowledge; it was recognised as a public corporation in 1923.

Its first president was S. Pincherle; in the year 1928, he organized in the University of Bologna (where the U M I has its office) an International Congress of Mathematicians. Presently, the U M I has nearly 2800 members.

The U M I organizes meetings to discuss general themes of mathematical research or teaching. Its different Committees prepare documents or recommendations, and get in touch with authorities to present the opinion of the mathematical community about single problems.

The dues for membership to the U M I for 1986 is L. 20.000, for members of foreign mathematical societies with a Reciprocity agreement with U M I.

Members of the London Mathematical Society are very welcome to join the U M I under the Reciprocity Agreement. In this case, they would receive a monthly "Notiziario" containing general informations of interest for the mathematical community. They would also receive section A of the *Bollettino* (a refereed research journal), containing survey papers and shorter notes.

Members may also purchase with discount (for personal use) the section B of the *Bollettino*, as well as other publications of the U M I (series of Monographs, Lecture Notes, Collected works of great Italian mathematicians, *Bollettino di Storia delle Scienze Matematiche*).

Details about prices of publications, activities of the U M I, as well as application forms, may be obtained from the Secretary of the U M I (Dipartimento di Matematica, Piazza Porta S. Donato 5, 40127 Bologna).

COUNCIL NOMINATIONS

Members of the Society are reminded that nominations of members for election to the Council of the Society may be made by writing to the Council and General Secretary so as to arrive before noon on 1st September. Any nomination must be made in accordance with the Charter, Statutes and By-Laws of the Society, must state the office or term of membership of Council to which nomination is made, must be signed by the member nominated, by the nominator and by a

second member who is also a member of the Society. All valid nominations received are added to those made by the Council at its June meeting, and circulated to the Society on a Ballot Paper which is used for voting in the Council Elections at the Annual General Meeting in November.

Christopher J. Mulvey,
Council and General

DEATHS

Some recent deaths of LMS members include:

Professor J. G. Semple, BA, MA, PhD. Elected an ordinary member 16 May 1929. Council 1937-48. Secretary 1944-47. Vice President 1940-42, 1943.

Mr. G. A. Bull, BSc. Elected an ordinary member 21 March 1946.

Dr. G. F. P. Trubridge, OBE, PhD, MSc. Elected an ordinary member 23 April 1936.

Professor E. Netanyahu, MA, PhD. Elected a reciprocity member 19 October 1972. Professor Netanyahu was for many years Professor of mathematics and Head of Department at Haifa, Israel. He was a regular attendee of meetings in Complex Analysis in England. He spent the academic year 1979-80 at Imperial College under a Royal Society Exchange Programme.

Dr. A. Rose, BA, BSc, FIMA. Elected an ordinary member 19 December 1948.

NINTH DUNDEE CONFERENCE ON DIFFERENTIAL EQUATIONS

The Ninth Dundee Conference on the Theory of Ordinary and Partial Differential Equations will be held in Dundee from 29 June to 4 July 1986. Invited speakers include P. L. Christiansen, D. L. Colton, W. A. Coppel, R. J. DiPerna, J. K. Hale, J. P. Keener, F. G. Leppington, D. Ludgiw, O. A. Oleinik, P. J. Olver, R. M. May, L. A. Segal, W. G. Strang, R.

Temen and P. E. Waltman.

Further information and application forms may be obtained from Dr. R. J. Jarvis, Department of Mathematical Sciences, The University, Dundee. DD1 4HN.

Closing date for applications is 30 May 1986.

RESEARCH SYMPOSIUM IN COMPLEX ANALYSIS

A Research Symposium in Complex Analysis will be held at Imperial College, 6-16 July 1987, with the support of the SERC. Principal topics will include value distribution theory; univalent and multivalent functions; potential theory and boundary behaviour. The meeting will also mark W. K. Hayman's work in this area at Imperial

College.

A further announcement of detailed arrangements will be made shortly. Further details may be obtained from I. N. Baker or T. Kövari at the Imperial College of Science and Technology.

CAMBRIDGE UNIVERSITY **Department of Pure Mathematics and** **Mathematical Statistics**

Applications are invited for a Temporary Lectureship or a Temporary Assistant Lectureship in Pure Mathematics for two years from 1 October 1986. The appointment is not renewable. Further information can be obtained from the Head of Department of Pure Mathematics and Mathematical Statistics, 16 Mill Lane, Cambridge, CB2 1SB, telephone Cambridge 337996. The closing date for applications is 14 June 1986.

UNIVERSITY COLLEGE OF **NORTH WALES** **BANGOR**

Demonstrator in Pure Mathematics

Applications are invited for a position as Demonstrator, for the period October, 1986 - July, 1987, inclusive, at £588 per month. The duties will include teaching assistance and involvement with research activities in the department. Further particulars may be obtained from the Staffing Officer, University College of North Wales, Bangor, Gwynedd, LL57 2DG, to whom applications with C.V. and names of two referees should be sent by 13 June, 1986.

LONDON MATHEMATICAL SOCIETY

Notice of General Meeting

There will be a General Meeting of the Society on Friday, 20th June 1986 at 3.30 p.m. in the Meeting Room of the Geological Society, Burlington House, Piccadilly, London, W.1., to consider a proposal by the Council of the Society to delete the existing By-Law II,3 and to substitute that printed below.

The New By-Law, if accepted, will increase the annual subscription of Corporation and Institutional members for 1986-87 to £256 from the 1985-86 level of £240.

Text of the Proposed By-Law II,3

The annual subscription to the Society of Corporation and Institutional Members for the 1986-87 session shall be £256, inclusive of one volume of the Bulletin and two volumes of the Journal and of the Proceedings, except that those Corporation and Institutional members who have more than one Representative shall pay an additional subscription of £6 for each Representative in excess of one.

C. J. Mulvey,
Council and General Secretary

INTERNATIONAL CONGRESS OF MATHEMATICIANS 1986

The London Mathematical Society intends to hold a meeting during the International Congress at the University of California, Berkeley. The meeting will be held at 6.00 p.m. on Friday 8 August 1986 in the Joseph Wood Krutch Theatre, Building 14 of the Clark Kerr Campus which is located at 2601 Warring Street, Berkeley. The meetings will be brief, its purpose being to give overseas members of the Society an opportunity to sign the Membership Book. It will be followed by a reception, organized in conjunction with Cambridge University Press and Oxford University

Press, at which hospitality will be extended to all members who are attending the Congress. Members who will be at the Congress and would like to attend the meeting/reception are asked to send a request for a ticket to the LMS Administrator, Miss S. M. Oakes, London Mathematical Society, Burlington House, Piccadilly, London W1V 0NL, England. Members are also invited to apply for tickets for accompanying spouses. Please give an address to which the ticket should be sent in June. Tickets to overseas members will be sent by Air Mail.

INTERNATIONAL COMMISSION ON MATHEMATICAL INSTRUCTION

A discussion document *Mathematics as a Service Subject* is now available from the ICMI Secretariat, Dept. of Mathematics, The University, Southampton, SO5 9NH. (Please enclose a 17p stamp).

An international meeting on this topic will be held at the International Centre for Mechanical Sciences, Udine, Italy from 6-10 April, 1987.

LOW DIMENSIONAL TOPOLOGY SYMPOSIUM

A geometric topology symposium will be held at The University of Sussex during July and August 1987. Topics include: low dimensional manifolds, knots, links and associated algebraic problems, and other topics of geometric topological nature. A series of lectures will be given by invited speakers and participants will be free if time permits to give talks on their own particular developments.

During 21-24 July a more concentrated conference will be held at the Isle of Thorns Conference Centre in the Ashdown Forest. For more details of the symposium and the conference, write to: Roger Fenn, Mathematics Division, University of Sussex, Falmer, Brighton, BN1 9QH.