

THE LONDON MATHEMATICAL SOCIETY NEWSLETTER

No. 213

February 1994

FORTHCOMING SOCIETY MEETINGS

Friday 18 February 1994, Newcastle

D.J.H Garling, S.C. Power

Friday 18 March 1994, Burlington House

N. Ray, J. Tits

Friday - Saturday, 13-14 May 1994, Leeds

Ring Theory and Representation Theory

Friday 17 June 1994, Burlington House

B.J. Birch, J. Eells

Friday 21 October 1994, Burlington House

Mathematical Biology

Friday 18 November 1994, Burlington House

VISIT OF PROFESSOR F. GHAHRAMANI

Professor F. Ghahramani of the University of Manitoba at Winnipeg will be visiting the United Kingdom in February and March 1994, supported by a Scheme 2 grant of the London Mathematical Society. He will give the following lectures: "Second dual algebras of group algebras and amenability" on Tuesday 1 March 1994, to the Yorkshire Functional Analysis Group, in Room G, The School of Mathematics, University of Leeds, at 3.30 pm (contact H.G. Dales);

"Amenability of second dual spaces" Monday 7 March 1994, to the Edinburgh Analysis Seminar, in Room 5215, King's Buildings, University of Edinburgh, at 2.00 pm (contact A.M. Sinclair); "The second dual algebras of group algebras of locally compact groups" Friday 18 March, to the Canterbury General Colloquium, in the McVittie Library, Institute of Mathematics and Statistics, University of Kent at Canterbury, at 2.00 pm (contact C.F. Woodcock).

VISIT OF PROFESSOR VIKTOR BURENKOV

Professor V. Burenkov from Moscow will be visiting the United Kingdom from the middle of January 1994 for approximately 6 weeks. His visit has been made possible by a travel grant from the London Mathematical Society. He will lecture on "Fourier Multipliers for Weighted LP-spaces with Exponential Weights" at the University of Bath on 2 February, at the University of Sussex on 14 February,

at the University of Strathclyde on 23 February and the University of North London on 2 March. These lectures are open to all interested. Further details may be obtained from Professor E. Kissin, School of Mathematical Sciences, University of North London, 166 - 220 Holloway Road, London N7 8DB, e-mail: 11kissine@uk.ac.unl.clstr.

VISIT OF PROFESSOR R. DUDUCHAVA

Professor R. Duduchava from the Republic of Georgia will be visiting the United Kingdom in February. The visit has been made possible by a travel grant from the London Mathematical Society. His lecture, entitled "Singular integral equations on curves with cusps and their application to 2D elasticity problems"

will take place at the University of Bath at 12.15 on Friday 4th February in Room 2 East 3.5. Further details may be obtained from Dr Ivan Graham, School of Mathematical Sciences, University of Bath, Bath BA2 7AU, telephone: 0225 826343, e-mail: igg@uk.ac.bath.maths.

LaTeX2e EVENT

The UK TeX Users Group is organising a 2-day LaTeX2e event to announce this New Standard version of LaTeX. It will take place at Warwick University on 21 - 22 March, 1994. The cost is £80-90 all-in, with one night's accommodation. It is advised to book early as accommodation is limited.

Presentations by members of the LaTeX3 team will cover: how to install it; how to integrate your local styles; how to

use scaleable fonts; how to integrate graphics; how to process existing documents; how to use the new features; how to write extension packages.

Further information and booking forms are available from Malcolm Clark, Computing Services, University of Warwick, Coventry CV4 7AL, e-mail: m.clark@warwick.ac.uk, tel: 0203 523365 or 523254, fax: 0203 523267.

CHAOS AND FORECASTING

There will be a Discussion Meeting "Chaos and Forecasting" organised by Dr B. Grenfell, Professor R.M. May and Professor H. Tong, at the Royal Society on Wednesday 2 and Thursday 3 March 1994. There is no registration fee, but

advance registration for the meeting is required. Registration forms and further information are available from The Royal Society, 6 Carlton House Terrace, London SW1Y 5AG, telephone 071 839 5561, ext. 278.

ISAAC NEWTON INSTITUTE

New programmes at the Newton Institute have now started. In the *Geometry and Gravity* programme there will be a Survey Conference on *Classical and Quantum Gravity*, Monday 28 March to Thursday 31 March. Those wishing to attend should apply to the Deputy Director; application forms are available by post or by e-mail from i.newton@newton.cam.ac.uk. There will be a series of six public lectures on *The Nature of Space and Time* at 5 pm on Monday 25, Wednesday 27 and Friday 29

April and Monday 2, Wednesday 4 and Friday 6 May given alternately by Stephen Hawking and Roger Penrose, followed by a debate between the two lecturers on Monday 9 May. The parallel six-month programme is on *Cellular Automata, Aggregation and Growth*. Throughout the programme there will be seminars given by both participants and by outside speakers. A series of short workshops will be held during the programme.

IVOR M.H. ETHERINGTON

Professor Ivor M.H. Etherington, FRSE, who was elected a member of the London Mathematical Society on 17 January 1952, died on 1 January 1994 at the age of 85.

LONDON MATHEMATICAL SOCIETY

FRIDAY 18 FEBRUARY 1994

S.C. Power (Lancaster) will speak at 3.30 on

Approximately Finite-dimensional Operator Algebras

D.J.H. Garling (Cambridge) will speak at 5.00 on

Do Banach Spaces Have a Future?

The meeting will be held in Room M414
Merz Court, University of Newcastle

Tea will be served between 4.30 and 5.00 in the
common room on the fourth floor

All interested are very welcome

Enquiries may be addressed to Dr M.C. White,
Department of Mathematics & Statistics, The University,
Newcastle upon Tyne NE1 7RU, telephone 091 222 7304

LMS-SERC INSTRUCTIONAL CONFERENCE ON ANALYTIC ASPECTS OF PARTIAL DIFFERENTIAL EQUATIONS University of Bath 19-24 September 1994 First Announcement

The Council of the London Mathematical Society and the Science and Engineering Research Council Mathematics Committee have established a series of short instructional conferences to expose postgraduate students to core areas of modern mathematics. The first, on Algebraic Groups and Lie theory, was held at Lancaster in September. The second, on Analytic Aspects of Partial Differential Equations, will be held at the University of Bath from 19th till 24th September 1994 inclusive (participants are expected to be in residence on the evening of Sunday 18th). Courses of lectures, with exercise classes and tutorial support, on Sobolev Spaces, Maximum Principles and Variational Methods will be given by Professors D.E. Edmunds (Sussex), L.E. Fraenkel (Bath) and F. Murat (Paris). The courses are being carefully planned and co-ordinated, so as to be accessible to research students at the end of a first year

of postgraduate study. Participants are not expected to be specialists in partial differential equations. (Details of preliminary reading will be circulated in good time for participants to prepare a common background.)

Support from SERC is available for subsistence for 30 SERC supported students. In addition, help with subsistence is available for a limited number of non-SERC supported students, thanks to an LMS grant for that purpose. Participants should make the necessary arrangements for private or departmental support for travel though we understand that SERC supported students can reclaim fares from SERC. Anyone interested should write to Professor J.F. Toland, School of Mathematical Sciences, University of Bath, Bath BA2 7AY, including a full *curriculum vitae*, and explaining as fully as possible the level of support sought.

LMS VIDEOS

Members involved in preparations for the National Week of Science Engineering and Technology, 18 - 27 March 1994, might welcome an up-to-date list of the videos available for hire from the Society.

Designing Experiments with Allowance for Interfering Neighbours by Professor R.A. Bailey
Wallpaper Patterns in Different Geometries by Dr A.F. Beardon
Chaology by Professor M. Berry
How Mathematics Gets into Knots by Professor R. Brown
Geometry and Computers by Dr P. Giblin
Games that Solve Problems by Professor W.A. Hodges
How should a Mathematician think about Shape? by Professor D.G. Kendall
The Art of Asymptotic Approximation by Professor F.G. Leppington
The Rise and Fall of Matrices by Professor W. Ledermann

Games Animals Play by Professor J. Maynard Smith
Optimization of Running and Jumping by Professor McNeil Alexander
Heads I Win, Tails you Lose by Dr L. Mustoe
A Breakthrough in Algebra by Dr P.M. Neumann
Codes and Ciphers by Professor F.C. Piper
How to see Objects in Four Dimensions by Professor S.A. Robertson
Stamping through Mathematics by Dr R.J. Wilson
Geometry and Perspective by Professor E.C. Zeeman

The cost to hire is £5.00 per video. Send your order together with payment (payable to The London Mathematical Society) to: LMS Video Secretary, School of Mathematics, University of Leeds, Leeds LS2 9JT.

MIDLANDS AND NORTHERN UNIVERSITIES STATISTICAL GROUP

The 28th meeting of the Midlands and Northern Universities Statistical Group will be held on Friday 15 April 1994 at the Sheffield Hallam University. The speakers are Professor J.A. Nelder (Imperial College) "Inference from linear models - unscrambling the egg"; Professor J.N.R. Jeffers (University of Kent) "The statistician and the computer"; Professor V. Barnett (Rothamstead Experimental Sta-

tion) "Environmental statistics: a theme for the nineties". Further details are available from Dr Tony Tricker, School of Computing and Management Sciences, Division of Applied Statistics, Sheffield Hallam University, Hallamshire Business Park, 100 Napier Street, Sheffield S11 8HD, telephone: 0742 533158, e-mail: a.r.tricker@uk.ac.shu.

INTERNATIONAL CONFERENCE ON ASYMPTOTICS IN MECHANICS

An international conference on Asymptotics in Mechanics will be held at the Marine Technical University of St Petersburg from 14 to 17 August 1994. The conference provides a forum for active researchers to discuss the state of the art in asymptotic methods in mechanics and applied mathematics. The areas to be covered are: Nonlinear Dynamics and Chaos; Asymptotics in Mechanics of Fluids and Acoustics; Asymptotics in Mechanics of Rigid and Deformable Bodies; Singularly Perturbed Problems of Mathematical Physics and Applications; Modern Software for Asymptotic Methods. The Proceedings of the Conference will be published. Interested authors are invited to submit an abstract by e-mail in TEX or by mail in

camera-ready format, as early as possible. The abstract must be limited to one page including supporting figures, typed double-spaced, written in English. Each registered participant will receive one copy of the Proceedings. The registration fee is US\$200. Information may be obtained from and abstract submitted not later than 1 March 1994 to: Dr G.M. Fridman or Professor N.S. Grigorieva, Department of Applied Mathematics and Mathematical Modelling, Marine Technical University of St. Petersburg, 3 Lotsmanskaya str., 190008 St. Petersburg, Russia, telephone: 812-1572566, 812-1572577, fax: 812-1572533, e-mail: grifri%mtu-mic.spb.su@relay.fuug.fi or nsgrig%mtu-mic.spb.su@relayfuug.fi.

F.E. WHITEHART

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REGIONAL MATHEMATICAL CIRCLES

The *British Mathematical Olympiad Committee* and the *UK Mathematics Foundation* would like to encourage the formation of local groups for interested secondary pupils, which meet on a regular basis, which are aimed at committed students aged 15-18, and which seek to develop the mathematical interests and skills of those who take part. Thus, these groups would be aimed at slightly older students than most *Royal Institution* classes, and so would supplement rather than replace existing opportunities.

Students face increasing pressures to attend a local university. Moreover, GCSE and A level mathematics are now aimed more at the average student, and so are less challenging for prospective mathematics undergraduates; they also provide an increasingly insecure preparation for undergraduate mathematics. It is thus in the interests of university mathematics departments to become more visible in their local community, and to provide some opportunity for able students in their area who might otherwise not know what mathematics has to offer.

The only such groups known to us at present, are all very different. The *Advanced Masterclasses* (run by Terry Heard, City of London School) have been going for many years, but are slightly different from what is being proposed. Three other groups have begun recently. In Birmingham (Tony Gardiner and Boris Klebanov) a group of 10-25 students meets monthly after school with a problem-solving focus aimed at Birmingham's twice yearly participation (Autumn and Spring) in the Moscow-based mathematical competition *International Tournament of the Towns*. In Bristol (Christopher Bradley from Clifton College, and Peter Robinson) a group of 10-20 students has been meeting on certain Saturdays following a systematic course of elementary Number Theory and other topics. In Egham (Fred Piper, RHBNC) a group of 40 or so students meets on Saturdays during the Easter term for a variety of challenging activities.

The annual costs of running such a local

group (meeting, say, 9 or 10 times a year - either once a week during one term, or once a month throughout the year) are very modest. But as a catalyst to remove local concerns about how such a group would be financed,

- we are willing to provide an initial grant to each group.

For a local group to thrive its style must reflect the interests of the local organisers: thus there can be no imposed uniformity between groups (other than the common purpose of encouraging youngsters to develop and to share their enjoyment of mathematics). However, to encourage those who, though keen to start such a group, might feel unsure about suitable material, we can supply:

- multiple copies of a small selection of booklets which are being developed for student use (on combinatorics, geometry, number theory, problem-solving).

We can also provide a whole range of problem-based material for students of different ages.

Though local groups will have their own agenda, and their own preferred ways of linking in to schools in their area, we can also provide:

- names and schools of students in your locality who, on the basis of the ability and interest they have already demonstrated (in a range of national 'challenge' or 'Olympiad' papers, or in regional take-home puzzle competitions), are likely to welcome the formation of such a group.

These lists could be updated each year as we become aware of new students in your area.

Enquiries may be addressed to any of those named in this note. A sample pack of materials, together with an outline of each of the existing groups (including details of their programmes, styles, numbers, mistakes made and lessons learned, responses from students and schools, etc.) may be obtained from: Tony Gardiner, School of Mathematics, University of Birmingham, Birmingham B15 2TT.



Universität Zürich
Philosophische Fakultät II

Applications are invited for two positions as

PROFESSOR OF MATHEMATICS

at the University of Zürich, one in Analysis and one in Numerical Analysis. Applicants are expected to be active in research and to be willing to participate in teaching at all levels.

Applications, including CV and list of publications, should be sent to Professor G. Rasche, Dekan der Philosophischen Fakultät II Zürich-Irchel, Winterthurerstrasse 190, CH-8057 Zürich, to arrive before 15th February 1994.



UNIVERSITY COLLEGE LONDON

Department of Mathematics

Applications are invited for 3 Lectureships (one Pure, two Applied) to start in October 1994.

For the Applied posts, research interests in Theoretical and/or Computational Fluid Dynamics is desired; interest in computer aided learning/computer skills could be an advantage.

For the Pure post, research interest in one of the current areas of strength in the Department is important.

Applications, including the names of three referees, should be sent to Professor D G Larman, Head of Department of Mathematics, University College London, Gower Street, London WC1E 6BT.

Closing date is Friday 18 February 1994.

Working Toward Equal Opportunity

MATHEMATICS AND COMPUTING

a m turing



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We received the following reply to Yuri Gurevich's article on Feasible Functions in Newsletter 206. It comes from Mike Stannett in Sheffield.

Writing recently in this column [G], Yuri Gurevich argued cogently that it is not enough to show that some problem or other is computable - one also needs to know its general complexity. He begins "It is common to identify the class of computable functions with the class of functions computable by a Turing machine ... on the ground of the famous Church-Turing thesis. In fact, the thesis justifies only one implication: computable functions are Turing computable. The other implication is quite obviously false if computability means practical computability".

In fact, even the first implication is false if computability means practical computability. 'Feasibility' in such circumstances is not a purely mathematical concern, but involves questions of physical realisability, and ample evidence exists that functions may be physically realisable even though they are not Turing computable.

Work published in 1981 by Pour-El and Richards [PR] demonstrated a set of Turing computable initial data for the wave equation, such that its unique solution after a computable amount of time, and at a computable location, was not computable. In principle, then, we would expect that non-Turing computable numbers can be generated by systems designed and operated even using conventional computing equipment. In fact, theoretical objections to the 'feasible implies Turing computable' notion go back at least to Myhill's work of the early 1970s [M] in which he demonstrated a recursive function whose derivative is not recursive. Again, this means that we could connect the output of a digital computing

device to a standard analog differential unit, and so generate physically realisable values - observable at times indicated by standard digital equipment - that are not Turing computable.

Clearly, it could be argued that the major deficiency of Turing machines that renders even Gurevich's limited version of the Church-Turing thesis vulnerable to such attack is that they operate in discrete steps, whereas processes in the real world can be continuous. Would that things were that simple! Unfortunately, as soon as one defines feasibility in terms of physical realisability, one is confronted by the fact that many versions of physics exist. If we assume a Newtonian world, it is easy to see that an 'analog version' of the basic Turing machine model can be described [S], and similarly Deutsch [D] has considered machines constructible in a quantum world. Intriguingly, in Deutsch's model, 'computable' once more equates with 'Turing computable', but unfortunately he makes the crucial, and in my view flawed, assumption that a 'finitely specified' model necessarily yields a system with only finitely many internal states. The existence of differential equations - and in particular Schroedinger's equation - which yield infinitely many solutions is clear testimony that this implication is not valid.

It would be interesting to see the development of other models. For example, the lack of a clear meaning for simultaneity in relativistic models will require the development and application of extremely powerful techniques for the analysis of concurrent systems, similar to those being developed by the 'trace theory' school across Europe [DE], but allowing for considerably more flexibility in the underlying models of time and causality.

References

- [D] Deutsch, D. 1985 "Quantum theory, the Church-Turing Principle and the Universal Quantum Computer", Proc. Royal Soc. A400 pp 87-117.
- [DE] Dieckert, V. and Ebinger W. (eds) 1992 Proceedings ASMICS Workshop Infinite Traces, Tuebingen, January 23-25, 1992. Universitaet Stuttgart: Fakultaet Informatik, Bericht 4/92.
- [G] Gurevich, Y. 1993 "Feasible Functions" LMS Newsletter 206 pp 6-7.
- [M] Myhill, J. 1971 "A recursive function, defined on a compact interval and having a continuous derivative that is not recursive" Michigan Math. J. 18 pp 97-8.
- [PR] Pour-El, M. B. and Richards, I. 1981 "The wave equation with computable initial data such that its unique solution is not computable" Advances in Mathematics 39 pp 215-39.
- [S] Stannett, M. 1990 "X-machines and the Halting Problem: Building a super-Turing machine" Formal Aspects of Computing 2 pp 331-41.

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This occasional column is for the discussion of topics on the boundary between mathematics and computer science, thus covering both applications of mathematics in computer science and uses of computers in mathematics. Relevant material such as opinions, notices about Maths & CS meetings and reviews of research, teaching and support software is solicited. Contributions should be sent to the editors of the column: w.hodges@qmw.ac.uk (Wilfrid Hodges, Queen Mary & Westfield College) dfh@maths.warwick.ac.uk (Derek Holt, University of Warwick).

ICIAM 95 1st Announcement and Call for Papers

The Third International Congress on Industrial and Applied Mathematics will be held from 3 - 7 July 1995 in Hamburg. The conference organizers are developing a programme that will focus worldwide attention on the importance of mathematical and computational methods in the solution of real world problems. A major exposition of computer hardware and software exhibits and demonstrations will enable you to explore state-of-the-art technology. The programme consists of invited and contributed lectures, mini-symposia, poster presentations, and an exhibition. The presentations are solicited in all areas of applied mathematics, computer science, applied probability and statistics, scientific computing, and applications in science, medicine, engineering, economics and other related fields.

You are invited to submit a paper, which you may present in lecture or poster format. Authors will have approximately 15 minutes for the lecture, with additional 5 minutes for discussion. Alternatively you may elect to give a poster presentation, which allows interactive discussions with individuals interested in your work. If you would like to present a paper (lecture or poster format), submit a summary on an ICIAM 95 contributed paper form. If you would like to organize a mini-symposium, you must submit a proposal on an ICIAM 95 mini-symposium form. To obtain either of these forms and guidelines, write to GAMM-Office, University of Regensburg, NWF 1 - Mathematik, D-935053 Regensburg, Germany. The deadline for submission of papers is 31 August 1994.

THE TEACHING AND LEARNING OF UNDERGRADUATE MATHEMATICS

The Teaching Committee of the Mathematical Association set up a Working Group on Teaching and Learning Undergraduate Mathematics which first met in March 1992. The Group contains four subgroups covering (a) Learning, (b) Teaching, technology and assessment, (c) Content, and (d) The school/university interface. This note describes the work that the Content subgroup has been doing.

The subgroup has met three times a year. The first result of its work was a report which supports the case for Geometry in undergraduate mathematics. The report contains sections on exploring geometry, geometry, logic and language, geometry for its own sake, geometry and algebra, and geometry and planetary motion. An article on the report appears in the Newsletter of the Working Group, No.1. (Nov 93). The complete report can be obtained by sending an A4 SAE to Dr A.K. Austin, Pure Maths Section, School

of Mathematics and Statistics, Hicks Building, The University of Sheffield, Sheffield S3 7RH. The subgroup has produced a brief for working groups at UMTC94 entitled 'Geometry in the undergraduate syllabus'.

Members of the subgroup distributed a questionnaire to mathematics staff at the universities of Leeds, Nottingham, Sheffield and London, King's College. The question asked was, 'What five "big" ideas should be included in the first two years of a Mathematics Honours Degree?' Fifty six responses were received. Again, a copy of the responses can be obtained from Keith Austin by sending an A4 SAE. At present the subgroup is looking at the teaching of Real Analysis in the First Year and in particular why students find analysis hard. The subgroup would welcome your contribution on this, or any other topic you feel it should be investigating.

Keith Austin


Coordinator of the Content Subgroup

INTERNATIONAL SYMPOSIUM ON SYMBOLIC AND ALGEBRAIC COMPUTATION ISSAC '94

The annual International Symposium on Symbolic and Algebraic Computation (ISSAC), sponsored (subject to confirmation) by the ACM Special Interest Group in Symbolic and Algebraic Manipulation (SIGSAM), will be held in the university city of Oxford (England) from Wednesday 20 to Friday 22 July 1994, with preliminary registration on Tuesday evening (19 July). Typical, but not exclusive, topics of interest include: algorithms for problems in algebra, number theory, group theory, algebraic geometry, differential algebra and differential equations; combined symbolic/numeric methods; languages and systems for symbolic computation; parallel symbolic computation; automatic theorem proving and programming; applications of symbolic computation to mathematics, science, engineering and education.

The local arrangements committee


consists of James Davenport (Bath), Exhibits/Sponsorship Chair, Steve Hague (NAG), Local Chair, and other colleagues. Exhibitions and demonstrations will take place during the Symposium, and an "accompanying partners" programme will be arranged. For further information on registration contact Steve Hague, NAG Limited, Wilkinson House, Jordan Hill Road, Oxford OX2 8DR, UK, e-mail: steve@nag.co.uk; for the programme contact Joachim von zur Gathen, (Programme Committee Chair), Department of Computer Science, University of Toronto, Toronto, Ontario M5S 1A4, Canada, e-mail: issac@cs.toronto.edu; for other matters contact Malcolm MacCallum (General Chair), School of Mathematical Sciences, Queen Mary & Westfield College, Mile End Road, London E1 4NS, UK, e-mail: mm@maths.qmw.ac.uk.



The Science and Engineering Research Council wishes to appoint a consultant to assist its Mathematics Committee in coordinating the Applied Non-Linear Mathematics Initiative.

CONSULTANT

APPLIED NON-LINEAR MATHEMATICS



The Consultant will be required to interact with the research community to encourage collaboration between mathematicians and applied scientists in academia and industry with a view to their developing high quality research grant applications which meet the strategic aims of the Initiative. Workshops, visits and publicity material with the Consultant's personal involvement, will help to foster this collaborative activity.

The Consultant will also be involved in the assessment and monitoring of research grants within the Initiative and will be required to advise the Committee on trends and strategies as they develop. The contract will be offered on the basis of seventy-five days per year activity. The post requires motivation and drive with good communication skills, coupled with a sound knowledge of the applied non-linear mathematics community. Part-time release from an industrial or academic post will be considered as will applications from those recently retired. SERC will pay a daily or monthly fee which will be open to negotiation.

Applicants should send their CV and a covering letter setting out their suitability for this appointment, to: Hugh Thurbon, Science and Engineering Research Council, Polaris House, North Star Avenue, Swindon SN2 1ET.

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RESEARCH COUNCIL

Closing date: 4 March 1994.

EUROPEAN COLLOQUIUM ON CATEGORY THEORY

First Announcement

The Universities of François Rabelais (Tours) and Denis Diderot (Paris 7) plan to hold a European Colloquium on Category Theory from 25 to 29 July 1994, the week before the International Congress of Mathematicians in Zürich, under the honorary presidency of Professor Saunders MacLane. Mathematicians expecting to be present in Europe at that time who wish to attend or participate are most welcome to pre-register now. An estimate of the participation is important at this stage of the organization. To pre-register either send a one-line

e-mail to ECCT-request@univ-tours.fr, with the one line SUBSCRIBE, without subject in the preamble; if you encounter any difficulty contact dampous@univ-tours.fr; or send your name and address (using printed capitals only) to ECCT, c/o Pierre Dampousse, Département de Mathématiques, Faculté des Sciences, Parc de Grandmont, Tours 37200, France. When pre-registered, you will automatically be sent information as the organization progresses. The deadline for submitting papers will be 1 April 1994.

CLASSICAL AND QUANTUM GEOMETRY OF HOMOGENEOUS SPACES

The International Sophus Lie Centre announces a Workshop-Conference on Classical and Quantum Geometry of Homogeneous Spaces to be held in Moscow from 12 to 20 August 1994, immediately after the International Congress of Mathematicians in Zürich. This Workshop-Conference will be devoted to the following topics: Lie groups and homogeneous spaces; Lie superalgebras and homogeneous supermanifolds; Quantum groups and homogeneous spaces; Representations; Hypergroups; Symmetries of differential equations. The working language will be

English. The workshop aspect of the meeting will include plenary lectures (accessible to graduate students); the conference aspect will consist of more specialised seminars, where experts will report on current results. In order to receive the first announcement (in February) please send your name, academic position and/or title, affiliation, mailing address, e-mail, and topic of your talk (if you plan to make one) to the following address: B. Komrakov, Centre for Advanced Study, PO Box 7606 Skillebekk, 0205 Oslo, Norway, e-mail: islc@shs.no; fax: 47 22 43 61 20.

9th BRITISH TOPOLOGY MEETING

Preliminary Announcement

The 9th British Topology Meeting will be held at Southampton University in September 1994. Talks will be held on Wednesday 21st and the morning of Thursday 22nd September, and accommodation will be available in a hall of residence on the nights of Tuesday 20th and Wednesday 21st of September. The

programme will be announced later in the year, as will funding arrangements. Enquiries should be addressed to: Dr Graham Niblo, Department of Mathematics, University of Southampton, Highfield, Southampton SO9 5NH, or by e-mail: btm@uk.ac.soton.maths.

MAINTAINING THE AVERAGE LENGTH OF THE COURSES

NEMAS Forum Response

The proposed funding restrictions are causing great concern to the departments of mathematics and statistics at the twelve northern universities represented by the North of England Mathematics and Statistics Forum. They threaten seriously to undermine the financial viability of the new three/four-year degree courses in mathematics now being introduced. The position is serious and urgent. Students have already this year been admitted to the new course at the University of Manchester, and at the Universities of Durham, Hull, Leeds, Liverpool and Sheffield applications are currently being received from students seeking admission to the new courses being introduced there in October 1994. The courses have already been advertised and so we have a moral if not legal commitment to those students presently admitted and to those to whom offers have been made. At several other universities represented by the Forum plans are well advanced for introducing similar courses in October 1995.

We wish to stress above all the strength of the academic case for this development. For some years the need to reform first degree courses in mathematics has been widely recognised. In 1991 a working party was set up by the London Mathematical Society to look into the future of honours degree courses in mathematics and statistics. Its report was published in February 1992 with the approval of the Councils of the London Mathematical Society, the Royal Statistical Society and the Institute of Mathematics and its Applications. The main thrust of the Report was the recommendation that a four-year course was urgently needed for some students, amounting nationally to approximately 30% of the annual intake. Subsequently the Joint Mathematical Council sought and obtained approval from the Department of Educa-

tion that the new three/four-year programme would attract LEA support under existing regulations for first degrees.

The new four-year M.Math. degree is needed to compensate for changes in the mathematical curriculum in schools, to provide a better training in a rapidly developing subject and to bring students in the fourth year nearer to areas of current research than would otherwise be possible. It will meet the need for a training comparable to that available in other European universities for those students who wish to become professional mathematicians in commerce, industry or research. The new three-year course will lead to an honours degree (BSc or BA) comparable to three-year degrees in other subjects and suitable for entry to a wide range of careers. The first two years of study will be the same for both the three- and four-year degrees, and the two together will make excellent provision for the differing needs of students. Several of the schemes at our universities have provision for students to leave after the first two years of the new course with a Diploma in Higher Education. However, as no students will be registered initially for this qualification, the potential this might have on maintaining average course length will not appear for some years in the data returns from universities.

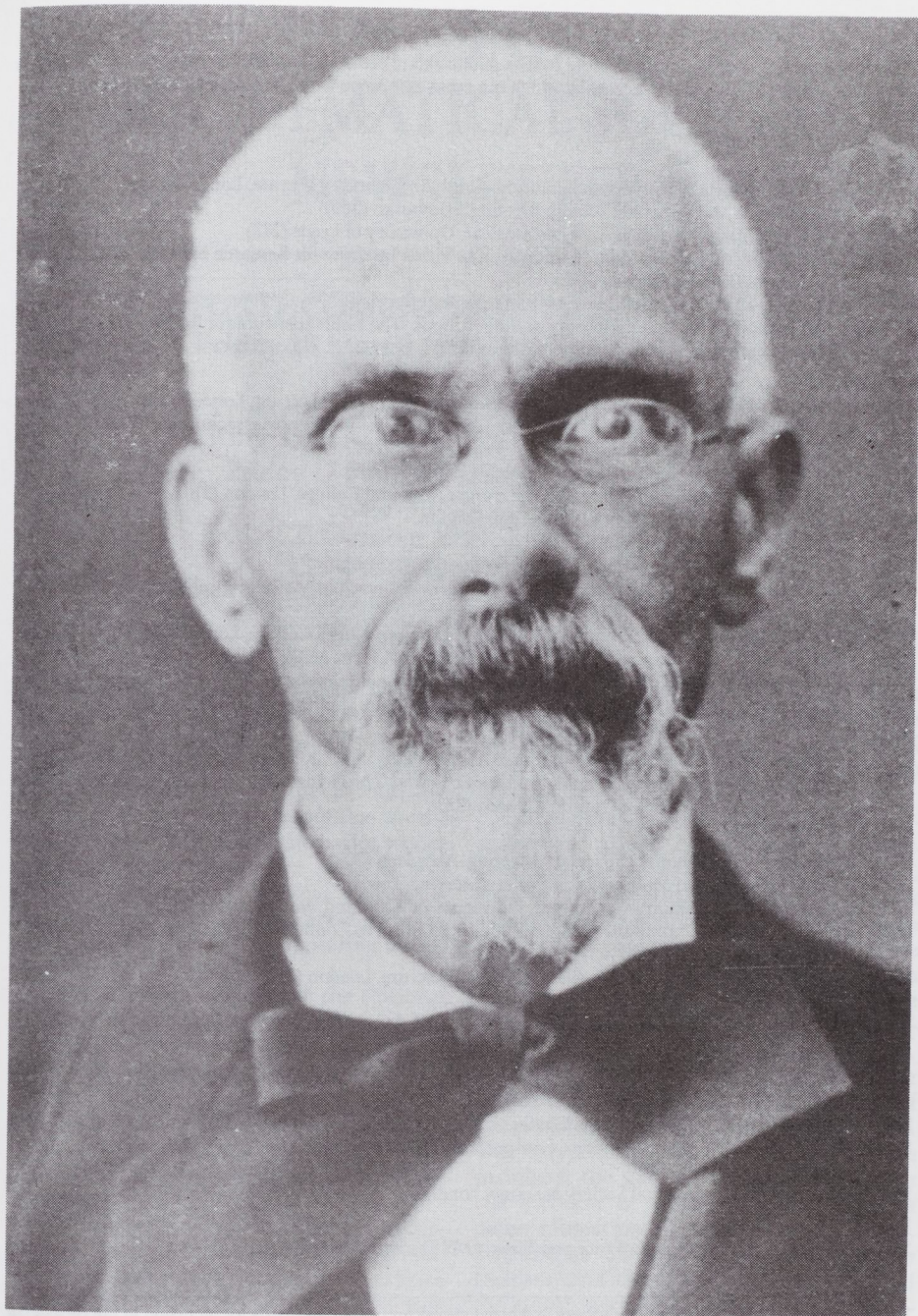
The mathematical community is convinced that there are very strong educational reasons for introducing the new degree structure. An enormous amount of work has been done in planning the new courses. All this will be wasted, and the opportunity for introducing the new courses lost, if the proposed claw-back of funds should make the new four-year course unviable.

Fred Cornish, University of York
Chairman, NEMAS Forum

LONDON MATHEMATICAL SOCIETY PUBLICATIONS PERSONNEL - 1994

PUBLICATIONS SECRETARY	D.A. Brannan (1986-).
DEPUTY PUBLICATIONS SECRETARY	N. Blackburn (1992-).
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DIARY

The diary lists Society meetings and other events publicized in previous issues of the Newsletter. For further information, refer to the figure in brackets, which is a cross reference to the LMS Newsletter number.

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FEBRUARY

- 1 The Dynamics of Darwinian Evolution, Gresham Geometry Lecture, London (212)
- 11 Edinburgh Mathematical Society Meeting, Edinburgh (209)
- 11-12 North British Functional Analysis Seminar, University of Leeds (212)
- 14-18 Workshop on Galois Module Structure, The Fields Institute for Research in Mathematical Sciences, Ontario, Canada (210)
- 18 London Mathematical Society Meeting, Newcastle
- 28-4 Mar Workshop on Algebraic K-theory and Arithmetic, The Fields Institute for Research in Mathematical Sciences, Ontario, Canada (210)

MARCH

- 3 What is the Circumference of a Circle?, Gresham Geometry Lecture, London (212)
- 5-6 Celebration of Women in Mathematics Conference, Cambridge, Massachusetts (212)
- 7-25 Workshop on Fluid Mechanics, ICTP, Trieste, Italy (207)
- 11 Edinburgh Mathematical Society Meeting, Dundee (209)
- 17 Seventh Schrödinger Lecture, Dr M.F. Perutz, Imperial College, London (210)
- 18 London Mathematical Society Meeting, London
- 18-27 National Science Festival (210)
- 19-20 Nonlinearity Meeting, Imperial College, London (212)
- 21-25 L-functions Conference, The Fields Institute for Research in Mathematical Sciences, Ontario, Canada (210)
- 21-25 Matrix Geometry and Physics, LMS Invited Lectures, King's College, London (207)
- 21-25 Symplectic Geometry of Moduli Spaces Conference, France (209)
- 21-1 Apr Stochastic Partial Differential Equations, University of Edinburgh (210)
- 28-31 British Mathematical Colloquium, University of Wales, College of Cardiff (210) (212)

APRIL

- 5-15 Instructional Conference on Harmonic Analysis & PDEs, ICMS, Edinburgh (210)
- 11-15 Workshop on L-functions and Automorphic Forms, The Fields Institute for Research in Mathematical Sciences, Ontario, Canada (210)

MAY

- 6 Edinburgh Mathematical Society Meeting, Aberdeen (209)
- 13-14 Two-day London Mathematical Society Meeting, Leeds
- 16-20 Groups and Geometry Conference, University of Auckland, New Zealand (212)
- 16-27 Workshop on Commutative Algebra and its Relation to Combinatorics and Computer Algebra, ICTP, Trieste, Italy (207)
- 31 Fermat's Last Theorem, Gresham Geometry Lecture, London (212)

JUNE

- 1-7 Algebraic Topology Conference, Barcelona, Spain (201)
- 4 Edinburgh Mathematical Society Meeting, St Andrews (209)
- 5-11 Workshop on Harmonic Analysis, Oscillatory Integrals & Applications to PDEs, ICMS, Edinburgh (210)
- 13-17 Elliptic & Parabolic Problems Conference, Pont-a-Mousson, France (204)
- 13-17 Hyperbolic Problems - Theory, Computations & Applications Conference, Stony Brook, New York, U.S.A. (204)
- 17 London Mathematical Society Meeting, London

JULY

- 1-11 Quantum Concepts in Space and Time, LMS Durham Symposia (211)

The Newsletter is published monthly except in August. Items and advertisements for inclusion in the Newsletter should be sent to the Editor, Susan Oakes, London Mathematical Society, Burlington House, Piccadilly, London W1V 0NL, to arrive before the first day of the month prior to publication. Telephone 071-437 5377, fax 071-439 4629, e-mail lms@uk.ac.kcl.cc.bay.

Printed by Boyatt Wood Press, Southampton (0703) 333132
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