THE LONDON MATHEMATICAL SOCIETY NEWSLETTER

No. 272

June 1999

FORTHCOMING SOCIETY MEETINGS Friday 18 June 1999 - London D. McDuff (Hardy Lecture), D Salamon Friday-Saturday 15-16 October 1999 - London New Applications of Twistor Theory Friday 19 November 1999 - London Annual General Meeting

COUNCIL DIARY 19 March 1999

The March meeting of Council was a long one, with a packed agenda. Much of the business concerned the issues discussed at the Retreat, reported at length in the last *Newsletter*, and we put into place many of the proposals raised there. One of these was the conversion of the Hardy Lectureship into a Hardy Fellowship - judging by the response at the time of writing, this is a move which has been welcomed by the membership.

Also arising from the Retreat, Council approved the formation of a committee on 'Women in Mathematics', whose remit is to promote the object of the Society as far as this concerns women, and appointed Catherine Hobbs to be its Chair. A proposal to hold an annual lecture in memory of Mary Cartwright and her contributions to mathematics and to the Society was warmly endorsed by Council.

We continued to investigate ways to strengthen our representation of mathematics as a whole, and to enhance our links with sister societies. We learnt that the President had been guest of honour at a recent IMA dinner, and that he had been made a Fellow of the IMA and a Chartered Mathematician; Henry Beker, President of the IMA, is becoming a member of the LMS. We welcomed this symbol of the increasing cooperation between the two societies, and various decisions were taken to enable us to work together more closely in promoting our common goals, particularly in representations to EPSRC and government. On a wider front, progress is being made in setting up a coalition of presidents of societies for mathematics and the physical sciences.

Council noted that the three year period assigned for launching the LMS Journal for Computation and Mathematics had come to an end, and thanked Wilfrid Hodges for his magnificent effort in successfully establishing the JCM from scratch.

Tony Scholl

BENCHMARKING

The Quality Assurance Agency is in the process of creating a set of so-called benchmarks, one in each subject, in the hope that these will reassure the government that all universities are offering suitable courses. What exactly is meant by a 'benchmark' is not clear, except that we are told that "The prime focus should be on the intellectual attributes associated with successful study of a discipline to degree level," not to define a national curriculum. See 'Higher Quality' No. 4 published by the QAA in October 1998 (http://www.qaa.ac.uk).

Panels have already met and produced draft benchmarks for Chemistry, History and Law. We have seen these and none of them looks like a suitable model for mathematics to follow. They are also quite different from each other, and they may be substantially changed to make them more compatible, so we have no idea what the final versions will look like.

A panel for mathematics is likely to be set up in the near future. It will be given the task of devising a single benchmark applicable to all courses in mathematical sciences, including statistics and operations research. This is a tall order, and so the Presidents of the LMS, IMA and RSS asked Professor Chris Robson, Chairman of the Joint Mathematical Council, to convene a meeting to consider the way forward. The meeting was held at De Morgan House on 12 April and was attended by representatives of the three societies, together with one from the Operations Research Society and an observer from HoDoMS.

The aim was not to attempt to draw up a benchmark but to exchange views and to identify problems. We discussed a number of issues, including the question of how benchmarking is supposed to relate to accreditation. As you may know, both the RSS and the IMA accredit degrees, though they do it differently both from each other and from the engineering institutions.

We do not know when we are going to be called upon to form a panel and start drawing up a benchmark, nor how much time we will be given to do it. We don't even know who the QAA is likely to approach, though we hope we have preempted that decision by agreeing to work together. In the meantime, if you have comments or suggestions about benchmarking in general or concerns about courses your department is involved in, please send them to the following address: Department of Peter Saunders. Mathematics, King's College, London WC2R 2LS (peter.saunders@kcl.ac.uk).

WOMEN IN MATHEMATICS

A lecture on 'Women in Mathematics' will be given by Dusa McDuff at 4 pm on Thursday June 17th in Room 1B06 of the Strand Building, King's College, London. There will be drinks in the Mathematics Department afterwards, and then supper at 6.30 pm at a nearby restaurant. Those who wish to have a meal that evening should e-mail the organiser Dr Alice Rogers (alice.rogers@kcl.ac.uk).

WOMEN IN THE HISTORY OF MATHEMATICS

University College London has produced a booklet entitled 'Women in the history of mathematics from antiquity to the nineteenth century' by Patricia Rothman. This booklet is available for educational purposes to members of the London Mathematical Society at a cost per copy of £1 to cover postage and packing in the UK (or £3 to cover postage and packing to overseas addresses).

Application should be made to the Administrator, Department of Mathematics, University College London, Gower Street, London WC1 6BT enclosing a cheque made payable to 'University College London'.

JACK HOWLETT, CBE

Dr Jack Howlett, CBE, who was elected a member of the London Mathematical Society on 12 December 1935, died on 5 May 1999, aged 86. He served as a member of Council from 1963-67.

SIR WILLIAM McCREA

Sir William McCrea, FRS, who was elected a member of the London Mathematical Society on 10 December 1931, died on 25 April 1999 aged 94. He served as a member of Council from 1934-36 and 1943-46, and was Vice-President from 1944-46.

LONDON MATHEMATICAL SOCIETY

FRIDAY 18 JUNE 1999

D. Salamon (ETH, Zurich) will speak at 3.30 pm on

Floer homology, Seiberg-Witten invariants, and Lefschetz fibrations

D. McDuff (Stonybrook) will give the 1999 Hardy Lecture at 5.00 pm

Symplectic topology today

The meeting will be held in the Gustave Tuck Lecture Theatre, University College, London WC1 Tea will be served at 4.30 pm

All interested are very welcome

There are limited funds available to help research students attend the meeting. Requests for support may be addressed to Dr D.J.H. Garling, London Mathematical Society, De Morgan House, 57-58 Russell Square, London WC1B 4HP (e-mail: garling@lms.ac.uk)

A dinner will be held in the Tudor Room, Imperial Hotel, Russell Square, London WC1 at 7.00 pm. The cost will be £25.00 per person, inclusive of wine. Those wishing to attend should inform Miss Susan M. Oakes, London Mathematical Society, De Morgan House, 57-58 Russell Square, London WC1B 4HP, enclosing a cheque payable to "London Mathematical Society" to arrive no later than Monday 14 June. Mathematics with Birkhäuser Second announcement!*

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LONDON MATHEMATICAL SOCIETY **1999 HARDY LECTURE TOUR**

In June, the 1999 Hardy Lecturer, Professor Dusa McDuff (Stonybrook) will give the following lectures:

Day 7 June Monday

9 June

Topic/Time/Location A survey of symplectic topology 3.45 pm Room 3E2.1. Bath

Contact Person Dr F.S. Burstall (feb@maths.bath.ac.uk)

A survey of symplectic topology 4.00 pm Place Room M12, Wednesday Mathematics Institute, Warwick

Quantum cohomology

3.10 pm Videoconference Suite

A survey of symplectic topology

4.00 pm Room 2.16, Dept of

Mathematics, Manchester

School of Mathematics. Bangor, Wales

Professor K.D. Elworthy (kde@maths.warwick.ac.uk)

(mas013@bangor.ac.uk)

(sharp@ma.man.ac.uk)

Dr T. Porter

Dr R. Sharp

11 June Friday

14 June Monday

16 June

Wednesday

Quantum cohomology 3 pm Room 27C, Main Building King's College, London

Dr W. Harvey (bill.harvey@kcl.ac.uk)

17 June Thursday Women in Mathematics 4 pm Room 1B06, Strand Building, King's, London

Dr Alice Rogers (alice.rogers@kcl.ac.uk)

Symplectic topology today Dr D.J.H. Garling 18 June (garling@lms.ac.uk) 5.00 pm (Hardy Lecture) Friday Gustave Tuck Lecture Theatre University College, London

All interested are very welcome to attend any of the lectures given by the Hardy Lecturer. It is advisable to check the time and venue with the contact person listed above. General enquiries about Professor McDuff's visit may directed to the Executive Secretary, Dr D.J.H. Garling be (garling@lms.ac.uk) or the Administrator (oakes@lms.ac.uk) at De Morgan House (tel: 0171 637 3686).

SOME LANDMARKS IN THE HISTORY OF MATHEMATICS An Exhibition

University College London Library Services hold more than 14,000 volumes of early printed books in mathematical sciences, mostly belonging to the Graves Collection, including many first editions and incunabula. It was thought the best way to commemorate the completion of the second millennium would be to hold an exhibition of early printed books in the collection to show the progress of mathematics during the past 2000 years, from Euclid to Gauss. The space for exhibiting books being limited we present only some of the milestones.

The exhibition is being held in the Flaxman Gallery, Main Library, Wilkins Building. It will remain open until 30 June 1999 during the normal opening hours of the Library. The LMS members are very welcome.

GRAVES LIBRARY

This magnificent library was bequeathed in 1870 by John Thomas Graves, Professor of Jurisprudence, UCL 1838-43. A book collector all his life he maintained interests in the three separate studies of law, classics and mathematics. His handsomely bound library which has been described as one of the most complete and valuable private libraries of its kind consists of an extensive collection of early books, pamphlets and manuscripts principally devoted to the early mathematics but also embraces the history of physics, applied mathematics in all its branches and to a lesser extent chemistry and the biological sciences. A large number of items were printed before 1640; 105 of the library's 202 incunabula originally belonged to the Graves collection, as did fifty-one outstanding individual manuscript items.

The most important single collection within the Graves library is the Euclid collection which has been added to by special purchases. It now comprises well over 260 items and contains eighty-three of the editions of works by Euclid printed before 1640; the College Library now holds all the first nineteen from the *editio princeps* published by Erhard Ratdolt at Venice in 1482, to the edition in 1574 of Accolti at Rome. The first complete translations into modern languages are to be found there also.

A collection of treatises by Sacrobosco, of which the Graves Library holds a fourteenth century manuscript, are represented by ten incunabula and twenty editions printed before 1640. Other notable famous works include first editions of Newton's Principia and Opticks, Thomas Salusbury's Mathematical collections of 1661-65, and first editions of the works of Priestley, Boyle, Kepler, Galileo and Napier, as well as important runs of early periodicals, such as a complete set of the Philosophical Transactions of the Royal Society from its first volume of 1665. French scientific periodicals are equally strong: the Académie des Sciences is represented almost completely with Histoire from 1699-, Mémoires from 1816- and Comptes rendus from 1835-. Other early European scientific journals are well represented too, as well as association copies of great historical interest which are constantly to be found, such as Henry Cavendish's own copy of Pascal's Traitez de l'equilibre de liqueurs of 1663 and a copy of Galileo's Il saggiatore of 1623 with a dedicatory inscription by the author. Of the fifty-one manuscripts, the most interesting are eleven early manuscripts on astronomy, astrology, mathematics and materia medica, much rarer than theological or liturgical manuscripts of the same period. Two of the most notable of these are an early 14th century Tractatus de sphera of Sacrobosco, and a 15th century illuminated calendar. Books are traceable through UCL Library's Libertas system.

For further inforamation contact Ms Susan Stead, Senior Library Assistant (Rare Books), Manuscripts & Rare Books, Library Services, Education & Information Support Division, University College London, Gower Street, London WC1E 6BT (tel: 0171 504 4445, fax: 0171 380 7727, e-mail s.stead@ucl.ac.uk).



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LONDON MATHEMATICAL SOCIETY

1999 POPULAR LECTURES

Liverpool University - Tuesday 8th June Strathclyde University - Thursday 17th June Institute of Education, London University - Tuesday 22nd June

Dr Frank Berkshire, Imperial College Floating, Spinning, Tumbling

How do objects like to float, tennis racquets spin and polyhedral dice come to rest? Order and chaos in action!





Professor Caroline Series, University of Warwick Tangent Circles - Patterns and Packings

Patterns of tangent circles have led to geometrical problems from ancient Greece to old Japan. Classical geometry has much to say about this, but the full solution is a wonderful 20th century idea.

LIVERPOOL Commences at 2.30 pm, refreshments at 3.30 pm, ends at 5.00 pm. Admission is free. Enquiries to Dr I. R. Porteous, Department of Mathematical Sciences, University of Liverpool, L69 3BX. (tel: 0151 794 4066/4043, e-mail: porteous@liverpool.ac.uk)

STRATHCLYDE Commences at 2.00 pm, refreshments at 3.00 pm, ends at 4.30 pm. Admission is free. Enquiries to Professor A. McBride or Dr P. Davies, Department of Mathematics, Strathclyde University, Livingstone Tower, 26 Richmond Street, Glasgow G1 1XH. (tel: 0141 548 3647/3416, e-mails: a.c.mcbride@strath.ac.uk, penny.davies@strath. ac.uk) (These lectures are organised jointly with the Edinburgh Mathematical Society.)

LONDON Commences at 7.00 pm, refreshments at 8.00 pm, ends at 9.30 pm. Admission is free, with ticket. Apply by June 18th to Miss S. M. Oakes, London Mathematical Society, 57-58 Russell Square, London WC1B 4HP. (E-mail: lms@lms.ac.uk) A stamped addressed envelope would be appreciated.

VISIT OF PROFESSOR M. FREIDLIN

The following talks will be given by Professor Mark Freidlin (University of Maryland, USA) when he visits the UK in June:

4th June at 3.00 pm: Department of Mathematics, University of Wales Swansea 'Stochastic Behaviour of Deterministically Perturbed Hamiltonian Systems'

11th June at 3.00 pm: Department of Mathematics, University of Wales Swansea 'Reaction-Diffusion in 2-D Incompressible Fluid: Asymptotic Problems'

16th June: Mathematics Institute, University of Warwick, Midland Probability Seminar 'Quasi-deterministic Approximation, Metastability and Stochastic Resonance'

25th June at 2.15 pm: Department of Mathematics, University of Hull 'Reaction-Diffusion in 2-D Incompressible Fluid: Asymptotic Problems'

For further information contact Mrs Sheila Jones, Department of Mathematics, University of Wales Swansea (tel: 01792-295459, e-mail: Mathematics@swansea.ac.uk). This visit

is receiving support from the LMS under a Scheme 2 grant.

VISIT OF PROFESSOR D. CANDOLORO

Professor Domenico Candoloro (Perugia) will be visiting Reading, London and Oxford in June. He will be lecturing on 'Problems Related to Finitely Additive Measures' and will lecture in Reading on Wednesday 2 June, at Goldsmiths College on Thursday 3 June and in Oxford at 5 pm on Tuesday 8 June in the Mathematical Institute. For further details contact one of the organisers: J.D.M. Wright (j.d.m. wright@reading.ac.uk); C-H. Chu (c.chu @gold.ac.uk) or C.M. Edwards (martin. edwards@queens.ac.uk). This visit is receiving support from the LMS under a Scheme 2 grant.

INTERNATIONAL NEAR-RING AND NEAR-FIELD CONFERENCE

The 15th in the biannual series of conferences on Near-rings and Near-fields will be held in the Department of Mathematics and Statistics of the University of Edinburgh from 11 July (arrival day) to 17 July (departure day). The following have agreed to give invited one hour lectures: Professor G. Peterson of James Madison University, Dr S.D. Scott of the University of Auckland and Professor K. Smith of Texas A&M University. Anyone who is interested in attending this conference should get in touch with Dr Meldrum at the University of Edinburgh (e-mail mel drum@maths.ed.ac.uk) as soon as possible. This conference is supported by the Mathematical Society, the London Edinburgh Mathematical Society and the Department of Mathematics and Statistics of the University of Edinburgh.

ALAN BAKER'S 60th BIRTHDAY

A meeting on Number Theory and Diophantine Geometry at the Gateway to the Millenium and to mark the 60th birthday of Professor Alan Baker will be held from 30th August to 4th September 1999 at the Eidgenössische Technische Hochschule, Zürich, Switzerland.

The present list of speakers are:

E. Bayer	V. Bernik
E. Bombieri	JB. Bost
P. Cohen	G. Faltings
D. Goldfeld	K. Györy
R. Heath-Brown	M. C. Liu
N. Margulis	D.W. Masser
F. Oort	P. Sarnak
K. Yu	D. Zagier

For further information contact: Ruth Ebel (Ruth.Ebel@fim.math.ethz.ch) or visit the web site (www.math.ethz.ch/ arithmetik+geometrie).

EMS SUMMER SCHOOLS CALL FOR PROPOSALS

The European Mathematical Society has been running a successful series of Summer Schools for some years now. Readers of the EMS Newsletter will recall, for example, reports on a 1996 Summer School in Hungary on Algebraic Geometry [issue 20, page 22] and a 1998 Summer School on Wavelets in Analysis and Simulation in France [issue 29]. The series is intended to include at least two summer schools each year, preferably at least one in Pure Mathematics and at least one in Applied With this activity, the Mathematics. Society aims to encourage young European mathematicians to meet and study together current developments in Mathematics and its applications.

The Society's Summer School Committee will consider sponsoring proposals for summer schools fully organised by other institutions. To meet the EMS expectations, each school should be at predoctoral level, last from 2 to 3 weeks, and have 100-200 participants - mainly graduate students or young mathematicians coming from several European countries. Costs of participation should be kept low, and (if possible) grants should be available to people from countries which cannot afford any financial support. The EMS will guarantee its moral support to the selected schools, plus advertising within the European Mathematical community; it will also do its best to help the organisers to raise funds.

Topics (which may be single or composite) for summer schools, the sites, and the organisers of the schools are likely to vary from year to year to cover a wide range of the subject. The Society is now inviting proposals for at least two Summer Schools for 2001. Proposals should contain at least: the topic (title and short description), names of likely lecturers, the site, the timing, anticipated costs, conditions for participants, organising committee membership, and name and address of the organiser submitting the proposal. Please send proposals to: Professor D A Brannan, Faculty of Mathematics and Computing, The Open University, Walton Hall, Milton Keynes MK7 6AA, United Kingdom (fax: +44 1908-652140, e-mail: d.a.brannan @open.ac.uk) if possible by 30th September 1999. The Committee would hope to decide on proposals within a month or so.

> David A Brannan Secretary

SECANTS

SECANTS (South of England Computational and Algorithmic Number Theory Seminars) will hold its twelfth meeting in Oxford on Saturday 26 June 1999. The main speakers will be Graham Everest (UEA): 'Elliptic Dynamical Systems' and David Soloman (KCL): 'padic Stark Conjectures at s=1: theory and computation'. In addition, there will be a series of short presentations by a number of PhD students in Number Theory about their work. SECANTS is funded partly by an LMS Scheme 3 grant with additional funding from Hewlett-Packard. For details of the programme, as well as general information about SECANTS, and how to be put on the e-mail mailing list, see http://www.maths.nott.ac.uk/personal /iec/secants/secants12.html.

VISIT OF R.A. KERMAN

Professor R.A. Kerman (Brock University, Canada) will be spending September 1999 in the UK as a Scheme 2 LMS visitor. Based at the School of Mathematical Sciences. University of Sussex, he will also visit King's College, London and the University of Wales, Cardiff. He will speak at Sussex on 20th September (Weighted mean convergence and summability of certain eigenfunction expansions), at King's on 21st September (Optimal Sobolev imbedding spaces) and at Cardiff on 29th September (Integral operators on Orlicz-Lorentz spaces). Further details are available from Professor D.E. Edmunds (d.e.edmunds@ sussex.ac.uk).

Princeton = Math

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This book presents many of the main developments of the past two decades in the study of real submanifolds in complex space, providing crucial background material for researchers and advanced graduate students. The authors include extensive preliminary material to make the book accessible to nonspecialists.

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CALLING ALL EPSRC REFEREES

Peer review is fundamental to the way in which EPSRC allocates research funds. Detailed constructive comments from expert referees are central to this process and it is these comments which Panels, made up of generalists, use to prioritise in order of scientific merit the research grant proposals before them. Panels are not asked to re-referee proposals but to moderate the comments of expert referees as a means of guiding the collective judgement of the panel members to prioritise the research proposals primarily in order of their quality. Normally three referees are approached for each proposal, one chosen from the three nominated by the proposer and two chosen from members of our peer review colleges, who were elected to the colleges by the research active community. Unfortunately, the response rate within the standard three-week reply period is very low and so the Office spends considerable time chasing referees replies and approaching additional referees. This creates not only additional work for EPSRC but also for you, the community, as well. In addition, we have had considerable difficulty since January in finding panel members from EPSRC colleges.

Another problem is that many of the replies EPSRC receives are brief, bland and not at all helpful to the Panel in rankordering the research grant proposals. Therefore, a request goes out from EPSRC, that if you receive a research grant proposal to referee please:

- let us know, within a few days of receipt, if you are unable to review it by the due date (normally this due date can be extended depending on when the prioritisation panel meets);
- send it back if you do not feel you can comment with Medium or High Confidence (it is not fair to the proposer to be judged by someone who does not know the work proposed and so low confidence replies are generally not

counted, which is a waste of time for yourself);

- suggest some alternative referees if you are unable to referee yourself;
- provide detailed constructive comments which Panels will find useful in rankordering proposals in competition;
- contact the Office if you have any queries;
- if you are regularly approached by EPSRC as a referee, let the Office know if you are going to be away from your normal place at work for any significant period (e.g. sabbatical).

EPSRC is well aware of the time pressures on the community and recognizes that peer review is not perfect, but it is the internationally accepted process for judging the quality of research grant applications and of scientific papers. However, for the research grant proposals you send to EPSRC to be assessed as best as possible, EPSRC needs and relies on your help and co-operation, not only in providing constructive detailed referee comments but also in being members of these prioritisation panels.

FUNCTIONAL ANALYSIS INSTRUCTIONAL CONFERENCE

There will be an instructional conference in Functional Analysis in Mussomeli, Sicily, from 22 to 29 September, 1999. This meeting is organised by Gianluigi Oliveri of Wolfson College, Oxford, and H. G. Dales of Leeds. It is intended for graduate students and younger colleagues - and all interested in learning about the topics that are to be considered. The common theme of the lectures will be 'Operators on Banach spaces and Banach algebras'. There will be three lecture courses, each in English and each consisting of 7 lectures, and there will be tutorials and written material to back up the lectures. The lecturers are:

- K.B. Laursen (Copenhagen) and P. Aiena (Palermo) Local spectral theory;
- J. Eschmeier (Saarbrucken) Invariant subspaces;
- H.G Dales (Leeds) Banach algebras and cohomology.

The conference will take place in the delightful small town of Mussomeli, in the centre of Sicily. For further details of the conference, see the web site (http://www.wolfson.ox.ac.uk/opera-tors/). To register for the conference, or for further details, please contact: G. Oliveri (gianluigi.oliveri@wolfson.ox.ac.uk) or H.G. Dales (pmt6hgd@leeds.ac.uk).

NATIONAL SYMPOSIA WEBSITE Isaac Newton Institute for Mathematical Sciences

The Newton Institute has set up a new website which will be a central point for information about UK symposia in the mathematical sciences, including conferences, workshops, instructional courses, one-day meetings and longer research programmes:

http://www.newton.cam.ac.uk/ symposia.html

It has been set up in cooperation with the London Mathematical Society, the International Centre for Mathematical Sciences (Edinburgh), the Mathematics Research Centre (Warwick), the Institute for Mathematics and its Applications and the Royal Statistical Society. Other Institutions are invited to contribute information, which will be held on a central database and incorporated in the website. It is hoped that the site will develop and become a valuable national recource.

To submit details of a symposium, please send an e-mail to: uksymposia @newton.cam.ac.uk requesting a proforma.

FREE SURFACE FLOWS IUTAM SYMPOSIUM

The University of Birmingham is hosting an IUTAM Symposium on Free Surface Flows from 10-14 July 2000. The mission of the Symposium is to present, review and discuss recent developments in the following areas:

- axisymmetric free surface flows,
- moving contact lines,
- non-linear water waves,
- bubble dynamics.

The local organising committee are: J.R. Blake (Co-Chair), A.C. King (Co-Chair), J. Billingham, S.P. Decent, Y.D. Shikhmurzaev, J.R. King, J.R.A. Pearson, E.J. Hinch, J.M. Vanden-Broek. The deadline for submission of abstracts is 1 January 2000. Abstracts should be submitted to: Dr Stephen Decent, School of Mathematics and Statistics, University of Birmingham, Edgbaston, Birmingham B15 2TT, or by e-mail (spd@for.mat.bham. ac.uk). Further information is available on the web (http://www.mat.bham.ac.uk/ research/iutam. htm).

3rd EUROPEAN CONGRESS OF MATHEMATICS Barcelona, 10- 14 July 2000 FIRST ANNOUNCEMENT

The organizing committee is pleased to announce that the Third European Congress of Mathematics will take place from Monday 10 through to Friday 14 July 2000. It is organised by the Societat Catalana de Matemàtiques, under the auspices of the European Mathematical Society.

Plenary Speakers

- Robbert Dijkgraaf (Universiteit van Amsterdam)
- Hans Föllmer (Humboldt-Universität zu Berlin)
- Hendrik W. Lenstra, Jr. (University of California at Berkeley & Universiteit Leiden)

- Yuri I. Manin (Max-Planck-Institut für Mathematik, Bonn)
- Yves Meyer (École Normale Supérieure de Cachan)
- Carles Simó (Universitat de Barcelona)
- Marie-France Vignéras (Université de Paris 7)
- Oleg Viro (Uppsala Universitet & POMI St. Petersburg)
- Andrew J. Wiles (Princeton University)

Scientific Programme

The programme of the Congress includes nine plenary lectures, thirty invited lectures in parallel sessions, lectures given by the EMS prize winners, mini-symposia, round table discussions, and poster sessions. As in previous European Congresses, a number of prizes will be awarded to mathematicians under the age of 32. Minisymposia are a new feature of the 3ecm; the Scientific Committee will select several current, interdisciplinary topics. Short communications by participants will be possible in the form of posters. Demonstrations of mathematical software, video and multimedia are also planned.

Committees

- The Scientific Committee is chaired by Sir Michael Atiyah (University of Edinburgh)
- The Prize Committee is chaired by Jacques-Louis Lions (Collège de France)
- The Round Table Committee is chaired by Miguel de Guzmán (Universidad Complutense de Madrid)
- The Organizing Committee is chaired by Sebastià Xambó Descamps (Universitat Politècnica de Catalunya)

Pre-registration

If you wish to receive the Second Announcement and information about the 3ecm by e-mail, please pre-register via the web site http://www.iec.es/3ecm (if you have not done so already). Pre-registration is free and implies no obligation whatsoever. In order to become a participant in the 3ecm, subsequent full registration and payment of the registration fee are necessary. Pre-registration is also possible by e-mail to

Secm@iec.es, or by ordinary mail to the Societat Catalana de Matemàtiques (see address below). Please indicate your name, institution, full mailing address, e-mail address, and scientific fields of interest (one or several fields may be chosen from the list given at the end of this message).

Registration

The period for registration for the 3ecm will begin in the autumn of 1999. Detailed information about the registration process will be given in the Second Announcement and posted on the web site. Continuing the tradition set by the previous European Congresses, the Organizing Committee will secure funds for conference grants covering registration and/or accommodation expenses. Deadlines for applications will be specified in the Second Announcement.

Call for Posters

All registered participants will have the opportunity to present their mathematical work in the form of a poster. Decisions on acceptance will be made by the Organizing Committee on the basis of an abstract which should reach the organizers before April 1, 2000. Acceptance will be confirmed before April 20, 2000. Accepted posters will be grouped according to subject. Authors will be asked to be present and available for questions and discussions during a specified period (yet to be determined). Abstracts of accepted posters will be available through the web site of the Congress. It is strongly recommended that abstracts be submitted electronically by using the form provided on the web site http://www.iec.es/3ecm/posters.htm. Abstracts may also be sent by e-mail to posters.3ecm@upc.es, with the Subject field containing exclusively the relevant section number (see the list of scientific topics below). Please follow the instructions given on the Congress web site. If electronic submission is not possible, the following mail address should be used: Posters 3ecm (Professor Josep M. Font), Facultat de Matemàtiques, Universitat de Barcelona, Gran Via 585, E-08007 Barcelona, Spain.

List of Scientific Topics

For organizational purposes, the following numbered list of scientific fields has been established:

- 1. Logic and Foundations
- 2. Algebra. Number Theory
- 3. Algebraic and Analytic Geometry
- 4. Differential Geometry
- 5. Topology
- 6. Discrete Mathematics and Computer Science
- 7. Modelization and Simulation
- 8. Ordinary Differential Equations and Dynamical Systems
- 9. Partial Differential Equations
- 10. Functional Analysis
- 11. Complex Analysis
- 12. Probability and Statistics
- 13. Real Analysis
- 14. Mathematical Physics

Call for Presentations of Mathematical Software

A session on mathematical software will take place during the Congress. In this session, mathematical software systems relating to all fields of mathematics, and applicable to a variety of purposes, will be presented. The scheduled length of a presentation including discussion will be 30 minutes. The systems presented should meet the highest standards with respect to mathematical content and technical quality in design and implementation. Public domain software will be given preference over commercial software. The Organizing Committee will evaluate and select a number of contributions according to criteria of mathematical originality, novelty and range of applications, bearing in mind the thematic balance of the session.

Submissions must be received by the organizers before February 1, 2000. They may be made electronically by using the form provided on the web page http://www.iec.es/3ecm/mathsoft.htm, or by e-mail to mathsoft.3ecm@upc.es, with a Subject field containing exclusively the word mathsoft. The following mail address can also be used for submission or to send

complementary material: Mathsoft 3ecm (Professor Santiago Zarzuela), Facultat de Matemàtiques, Universitat de Barcelona, Gran Via 585, E-08007 Barcelona, Spain. Contributors will be informed of the acceptance or rejection of their submission by April 1, 2000.

Submissions should be written in English, indicating the name and affiliation of the contributors. They should include clearly explained information about the foundations with regards to the systems, the fields of application, the targeted user community, the software design and techniques, and the availability of the software. A URL would also be very useful. Additional information will be available on the Congress web site. The e-mail address mathsoft.3ecm@upc.es may be used to contact the organizers or to ask any related questions.

Call for Video and Multimedia

In addition to the Scientific Programme, the 3ecm is organizing several complementary activities and cultural events. One of these is the preparation and production of a DVD containing both short videos and multimedia with mathematical content. This DVD will be exhibited in several general public sessions. It will also be available to individuals at various places throughout the 3ecm site. Submission of contributions for this DVD may be made from all areas of mathematics.

Selected short videos and multimedia will be combined in a DVD. The size of each contribution must be of the equivalent of approximately 5 minutes of video at most. Larger special contributions may also be considered. Contributions should be of interest to a broad audience, and meet the highest standards with respect to mathematical content, visualization techniques, artistic design and availability. The Organizing Committee will evaluate and select a number of contributions according to quality, interest, originality and thematic balance. Non-commercial contributions will be given preference.

Submissions must be received by the organizers before February 1, 2000. They

should be sent by ordinary mail to: Video 3ecm (Professor Santiago Zarzuela), Facultat de Matemàtiques, Universitat de Barcelona, Gran Via 585, E-08007 Barcelona, Spain. Each entry should include a complete signed submission form written in English. Submission forms are available at http://www.iec.es/3ecm/ video.htm, where additional detailed information about how to submit may be found. Contributors will be informed of the acceptance or rejection of their submission by April 1, 2000. The e-mail address video.3ecm@upc.es may be used to contact the organizers of this complementary activity or to ask any related questions.

Satellite Activities

The following is a list of satellite activities which have been acknowledged by the 3ecm Executive Committee by April 1999. Proposals for further satellite congresses or other mathematical events will be welcome until February 1, 2000. They should be communicated to the President of the Organizing Committee, either by e-mail to 3ecm@iec.es or to the Societat Catalana de Matemàtiques (see address below). More detailed indications about submission of proposals for satellite activities are given on the Congress web site.

The Executive Committee of the 3ecm offers the following advantages to organizers of satellite activities. A summary of information about each satellite activity will be freely distributed through the printed and electronic systems of the 3ecm. The reduced registration fee offered to participants of the 3ecm registered before April 2000 will be extended until the beginning of the 3ecm for satellite activity participants. Addresses of participants of satellite activities may be included in the mailing list of the 3ecm for distribution of information.

- Interactions between Algebraic Topology and Invariant Theory Summer School Greece, Jun 26 - Jul 1. Contact: N. Kechagias (nkechag@cc.uoi.gr)
- Functional Analysis Meeting (70th Birthday of Professor M. Valdivia). Valencia, Jul 3-

7. Contact: J. Bonet (vlc2000@mat.upv.es) or K.D. Bierstedt (vlc2000@uni-paderborn.de) http://www.upv.es/VLC2000/

- Harmonic Analysis & Partial Differential Equations Madrid, July 3-7. Contact: E.Hernández (eugenio.hernandez@uam.es)
- Joint Mathematical European-Arabic Conference Granada, Jul 3-7. Contact: C. Ruiz (alhambra2000@ugr.es) http://www.ugr.es/~alhambra2000/
- Evolution Equations Summer School Prague, Czech Republic, Jul 3-7. Contact: H. Petzeltová (petzelt@math.cas.cz)
- Number Theory Colloquium Debrecen, Hungary, Jul 3-7. Contact: A. Pethö (nt2000@math.klte.hu)
- Topology Meeting Bellaterra, Jul 4-7. Contact: C. Broto (broto@mat.uab.es)
- Congrés d'Educació Matemàtica Mataró, Jul 3-5 or 5-7. Contact: X. Vilella (xvilella@pie.xtec.es)
- Distributions with Given Marginals & Statistical Modelling Barcelona, Jul 17-19. Contact: C.M. Cuadras (carlesm@bio.ub.es)
- Lie Theory & Applications Colloquium Vigo, Jul 17-22. Contact: I. Bajo or E. Sanmartin (clieta@dma.uvigo.es) http://www.dma.uvigo. es/~clieta/index

Accommodation

A list of hotels of various categories will be offered in the Second Announcement, together with instructions for reservation. A large number of rooms at low prices will be available in student residences.

Contact Address

Societat Catalana de Matemàtiques, Institut d'Estudis Catalans, Carrer del Carme, 47, E-08001 Barcelona, tel: +34 93 270 1620, fax: +34 93 270 1180, e-mail: 3ecm@iec.es, web site: http://www.iec. es/3ecm/ also: http://www.si.upc.es/ 3ecm/.



SCHOOL OF MATHEMATICAL SCIENCES

Chair in Pure Mathematics (Ref. 090)

The University of Sussex invites applications for a Chair in Pure Mathematics. The appointed Professor will be active in a research area appropriate to the Centre for Mathematical Analysis and Its Applications, one of two research centres in the School of Mathematical Sciences. The Chair is tenable from 1 September 1999 or a later date to be arranged. Pure Mathematics at Sussex was rated at Grade 5 in the last Research Assessment Exercise. The Professor will be expected to provide enthusiastic leadership of the Pure Mathematics Group in both teaching and research. Associated with this Chair is a Lectureship in Pure Mathematics, which the Professor will be involved in filling.

Salary will be within the Professorial range.

Informal enquiries may be made to the Dean of the School of Mathematical Sciences, Professor Charles Goldie (E-mail: C.M.Goldie@sussex.ac.uk Tel: (+44) 1273 678311, or fax: (+44) 1273 678097).

Lectureship in Applied Mathematics (Ref. 091)

The University of Sussex invites applications for a Lectureship in Applied Mathematics. Candidates must have a proven record of excellence in research and will be expected to teach at undergraduate and postgraduate levels. The Lectureship is associated with the Centre for Mathematical Analysis and Its Applications in the School of Mathematical Sciences and, in particular, with the Applied Mathematics Group led by Professor C. M. Elliott, whose focus for research is the analysis and numerical analysis of partial differential equations and their applications. The successful candidate will have expertise in one or more of modelling, numerical and applied analysis and scientific computation, and be willing to collaborate with other members of the Centre. The post is tenable from 1 September 1999 or a later date to be arranged.

Salary will be on either the Lecturer Grade A (£16,655 - £21,815) or Grade B (£22,726 - £29,048) scale per annum according to qualifications and relevant experience.

Informal enquiries may be made to Professor C.M.Elliott (E-mail: c.m.elliott@sussex.ac.uk Tel: (+44) 1273 678111).

Further details of both posts and of the School's activities can be found on http://www.maths.sussex.ac.uk/Posts

Applications should include a full CV and the names and addresses of three referees, and are needed by 30 June 1999 or as soon as possible thereafter.

Further particulars may be obtained from Sandra Jenks, Staffing Services Office, Sussex House, University of Sussex, Brighton BN1 9RH, England. Tel: (+44) 1273 678201; Fax: (+44) 1273 678335, e-mail: S.Jenks@sussex.ac.uk or on http://www.sussex.ac.uk/Units/staffing/personnl/vacs/

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Number Theory in Progress

Proceedings of the International Conference on Number Theory organized by the Stefan Banach International Mathematical Center in Honor of the 60th Birthday of Andrzej Schinzel, Zakopane, Poland, June 30–July 9, 1997

Editors: Kálmán Győry • Henryk Iwaniec • Jerzy Urbanowicz

1999. 24 x 17 cm. XVI, VI, 1185 pages. Hardcover. 2 volumes. Set price. DM 398,-/approx. £ 136.00 • ISBN 3-11-015715-2



Volume 1 • Diophantine Problems and Polynomials Volume 2 • Elementary and Analytic Number Theory

These Proceedings contain 71 selected and refereed contributions arising from the International Conference on Number Theory held in Zakopane, Poland, from June 30 to July 9, 1997.

The conference was organized by the Stefan Banach International Mathematical Center to celebrate the 60th birthday of Professor Andrzej Schinzel and covered a broad spectrum of his mathematical interests. More than 130 mathematicians from all over the world attended the conference.

Andrzej Schinzel is well known for his original results in elementary, analytic and algebraic number theory, diophantine equations and reducibility of polynomials, which appeared in nearly 200 research papers. He is also the editor-in-chief of *Acta Arithmetica* - the first international journal devoted exclusively to number theory - for over 29 years.

The material is divided into two volumes according to the conference program: Diophantine Problems and Polynomials, and Elementary and Analytic Number Theory. The first volume covers diophantine equations, diophantine approximation, transcendental number theory and polynomials. The second volume contains papers on sieve methods, automorphic forms, Hecke operators, estimates on exponential and character sums, *L*-functions and other topics.

The two volume work containing articles from leading experts in the world encompasses an account of the state of research in a wide variety of topics. It will prove invaluable to anyone working in number theory.

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ICM'98/ICM2002 Thanks and Welcome

Dear Colleague:

This is a joint Circular Letter from the organizers of ICM'98 in Berlin and the organizers of the next International Congress (ICM2002) in Beijing.

The ICM'98 organizers would like to thank again all those mathematicians who have participated in ICM'98 and made this congress an outstanding event. We do hope that you all enjoyed this meeting and that you are considering taking part in the next International Congress in Beijing.

Those mathematicians on the current ICM'98 mailing list who were unable to participate in ICM'98 might want to consider to travel to Beijing in 2002 and to prepare for the trip by gathering information from the organizers of ICM2002. This is why the two Organizing Committees write this joint Circular Letter. It is the last Circular Letter of ICM'98 and the first of ICM2002.

The next International Congress of Mathematicians, ICM2002, will be held at the Beijing International Convention Center, Beijing, China from August 20-28, 2002. The server of ICM2002 has been put into operation, and an e-mail service has been set up to push all information to your desktop. We invite you to visit the website of ICM2002 (http://icm2002.org.cn/) and make a preliminary registration to keep you informed. For further inquiries, you may send an e-mail (cms@math08.math.ac.cn).

To make life easy for the subscribers to the ICM'98 mailing list who are also interested in ICM2002, the ICM'98 organizers propose the following procedure. For all those who are on the ICM'98 mailing list (ie, who receive the current e-mail) it is not necessary to make the preliminary registration, unless you would like to change your data (eg, because you moved). The ICM'98 organizers will forward the data of the members of the current mailing list, which includes the participants of ICM'98, to the ICM2002 organizers in Beijing.

All those who are not interested in the ICM2002 Circular Letters and want to be removed from the mailing list are asked to send an e-mail to icm98@zib.de with SUBJECT: REMOVE. We will remove all those persons from the list who have requested this by the end of May 1999. We assume that all other persons are interested in ICM2002 and will forward their data to the ICM2002 organizers in Beijing in June 1999.

We hope that this procedure is acceptable. We are all looking forward to meeting you in Beijing in 2002.

Martin Groetschel President of the ICM'98 Organizing Committee

Kung Ching Chang President of the ICM2002 Organizing Committee



DIARY

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

JUNE 1999

 Titchmarsh Centenary Meeting, Mathematical Institute, Oxford University (269)(270)
Edinburgh Mathematical Society Meeting, Aberdeen

(263)

8 LMS Popular Lectures, Liverpool University (271) 11 Fluid Dynamics Symposium in Honour of Norman Riley's Retirement, East Anglia University (271)

17 LMS Popular Lectures, Strathclyde University (271) 18 LMS Meeting, Hardy Lecture, London

20-24 Number Theory Association Conference,

Winnipeg, Canada (270)

21-25 Šingularity Workshop, Warwick University (270) **22** LMS Popular Lectures, Institute of Education, London University (271)

22-25 Mathematics of Finite Elements and Applications Conference, Brunel University (269)

28 - 2 July Nonlinear Partial Differential Equations Conference, Besançon, France (268)

29 - 9 July Stochastic Analysis LMS Durham Symposia, Durham University (268)

JULY 1999

3-4 Ergodic Theory and Dynamical Systems Workshop, Warwick University (270)

 5-9 International Congress of Industrial and Applied Mathematics (ICIAM 99), Edinburgh University (252)
5-9 Quadratic Forms and Their Applications

Conference, University College, Dublin (268)

6 Intuitionistic Modal Logic and Applications Workshop, Trento, Italy (270)

9-17 Computation in Group Theory and Geometry Workshop, Warwick University (270)

10-12 Complexity and Exact Computation over the Real Numbers, EPSRC/LMS MathFit Workshop, Royal Holloway, University of London (271)

11-14 Dynamics of Thin Fluid Films Workshop, ICMS, Edinburgh (271)

12-13 Hydrodynamic Instabilities, Waves & GFD Meeting, Bristol University (271)

12-13 Skew-Products and Synchronization of Coupled Systems Workshop, Surrey University (269)

12-16 British Combinatorial Conference, Kent University (254)(268)

12-16 American Mathematical Society and Australian Mathematical Society Joint Meeting, Melbourne University (260)

12-16 System Modelling and Optimization Conference, IFIP TC7, Cambridge (267)

17 Computation in Group Theory and Geometry Workshop, Warwick University (269)

18-28 Foundations of Computational Mathematics Conference, Oxford University (270)

19-24 Integrable Systems: Nonlinear and Nonlinear Dynamics Workshop, Islay (270)

19-24 Representation of Algebras Conference, Sao Paulo University (269)

19-29 Quantum Groups LMS Durham Symposia, Durham University (268)

25-7 Aug Banach Algebras International Conference, Pomona College, California (268)

26–6 Aug Integrable Systems Seminar, University of Montreal (267)

26-6 Aug Structure Formation in the Universe, Isaac Newton Institute, Cambridge (268)

AUGUST 1999

16-27 Connecting Fundamental Physics and Cosmology, E.C. Summer School, Isaac Newton Institute, Cambridge (269)

22-29 Hall Algebras Summer School, Hesselberg, Germany (263)

23 - 4 Sept Geometry and Physics of Monopoles Workshop, ICMS, Edinburgh (271)

30 - 3 Sept Algebraic and Geometric Topology

EPSRC/LMS short course, Warwick University (271)

SEPTEMBER 1999

6-24 Mathematical Developments in Modelling Microstructure and Phase Transformations in Solids, EC Summer School, Isaac Newton Institute, Cambridge (271)

11-17 British Association Festival of Science, Sheffield (270)

16-17 British Women in Mathematics Workshop, ICMS, Edinburgh (271)

20-25 Modular Invariants, Operator Algebras and Quotient Singularities Workshop, Warwick University (270)

OCTOBER 1999

15-16 Two-day LMS Meeting, New Applications of Twistor Theory, London

NOVEMBER 1999

2-5 Hilbert's 10th Problem, Relations with Arithmetic and Algebraic Geometry Workshop, Gent University, Belgium (271)

19 LMS Meeting - Annual General Meeting APRIL 2000

17-20 British Mathematical Colloquium, Leeds University

JULY 2000

3-7 Functional Analysis Meeting, Technical University, Valencia, Spain (265)

10-14 3rd European Congress of Mathematics, Barcelona, Spain

17-22 International Congress of Mathematical Physics, Imperial College, London (257)

APRIL 2001

9-12 British Mathematical Colloquium, Glasgow University

The Newsletter is published monthly except in August. Items and advertisements for inclusion in the Newsletter should be sent to the Editor, Susan Oakes, by e-mail, fax or post to the LMS office (addresses below), to arrive before the first day of the month prior to publication.

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