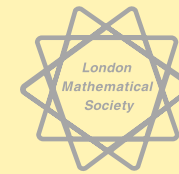


# THE LONDON MATHEMATICAL SOCIETY



NEWSLETTER

No. 354 December 2006

## Forthcoming Society Meetings

**2007**

**Friday 9 February**

London  
P. Maini  
A. Stevens  
(Mary Cartwright  
Lecture)  
[page 5]

**Friday 20 April**

Midlands Regional  
Meeting  
Loughborough  
Y. Colin de Verdière  
F. Kirwan  
O. Viro

**Wednesday 30 May**

SW and South Wales  
Regional Meeting,  
Cardiff

**Friday 22 June**

London

**Thursday 25 October**

Northern Regional  
Meeting  
Sheffield

**Friday 23 November**

AGM, London  
Presidential Address

## COUNCIL DIARY

17 November 2006

Council business generally falls into two categories: that which (at least in the short term) is confidential or personally sensitive, and that which is routine or dull! This presents difficulties for your Diarist who seeks items to hold readers' interest for a moment or two before they turn to the later pages of the *Newsletter* to read about more specific mathematical news and events. Nevertheless, it is obvious from my years on LMS Council that without the often formal and routine work done by Council, its officers and support staff, the mathematical activities of the Society would be extremely limited.

With the increase in Society business in recent years, many matters are remitted to subcommittees. As usual, Programme Committee met immediately prior to Council, and reported a list of very attractive future Society meetings with world-leading speakers. Programme Committee continues to support many high quality Scheme 1 to 5 grant applications, where it is clear that the LMS contributions make a real difference to the viability of research proj-

ects, meetings and conferences. The Personnel and Office Management (POMC) also met earlier in the morning and Council accepted its recommendation to increase the holiday allowance of staff and also to adopt a Childcare Voucher Scheme, whereby staff will have the option of receiving tax-free vouchers in lieu of part of their salary. Since POMC is concerned with Society employees and their welfare and hardly at all with 'Office Management', Council agreed on the new name 'Personnel Committee' (thus increasing the number of 'PC' subcommittees to four!).

Council was delighted to learn that, after quite lengthy negotiations, a new contract for LMS-EPSRC Short Courses (see page 4) has been finalised and accepted. These week-long courses aimed at PhD students have been highly successful in the past; planning future courses is now going on apace and further proposals are welcome.

The Research Councils UK consultation paper on the Efficiency and Effectiveness of Peer Review was circulated. Whilst the aim of reducing the direct and indirect costs of reviewing research proposals is laudable, Council was wary of a

broad-brush approach, for example concentrating resources on big grants, which would be likely to disadvantage mathematics. The Society will respond to the consultation through the Council for the Mathematical Sciences, highlighting the special needs of mathematics.

It is hardly surprising that the 'Next Steps Initiative' to prepare plans for a possible unification of the Society and the Institute of Mathematics and its Applications is regularly on Council's agenda (see November *Newsletter* page 8). Council received an interim report from the Joint Planning Group, which led to discussions on the Vision and Mission of a combined Society, on membership categories, and on the delicate matter of possible names for an amalgamated society.

Council concluded with the President thanking those about to retire from office: Martin Bridson (Vice President), Norman Biggs (General Secretary), Jim Howie (Publications Secretary), David Abrahams, Frank Kelly and Nina Snaith. A short walk

took councillors to University College London, where the Annual General Meeting was followed by two excellent talks relating to Ricci Flow by Peter Topping and Richard Hamilton.

Kenneth Falconer

### LMS PRIZES 2007 Announcement and Call for Nominations

In 2007, Council expects to award the De Morgan Medal, Senior Whitehead Prize, Berwick Prize, up to four Whitehead Prizes, and the Naylor Prize and Lectureship in Applied Mathematics.

Members wishing to nominate candidates should use the designated form, which is available to download from the LMS website ([www.lms.ac.uk](http://www.lms.ac.uk)) or can be obtained by contacting the Secretary to the Prizes Committee (tel: 020 7927 0803, email: [prizes@lms.ac.uk](mailto:prizes@lms.ac.uk)). Nominations should be received no later than **Friday 12 January 2007**.

Brief descriptions of the criteria for each Prize are given below. Council reserves the right not to make an award of any particular Prize in the event that no candidate of sufficient merit is recommended by the Prizes Committee. The full regulations for each prize can be obtained from the Society (contact details as above).

**The De Morgan Medal**, the Society's premier award, is awarded every third year (in years numbered by a multiple of 3), in memory of Professor A. De Morgan, the Society's first President. The De Morgan Medal is awarded to a mathematician who is normally resident in the United Kingdom on 1 January of the year of the award. The only grounds for the award of the Medal are the candidate's contributions to mathematics.

**The Senior Whitehead Prize** is awarded in odd-numbered years, in memory of Professor J.H.C. Whitehead, a former President of the Society. The Senior Whitehead Prize is awarded to a mathematician who is normally resident in the United Kingdom on 1 January of the year of the award. The grounds for the award may include work in, influence on or service to mathematics, or recognition of lecturing gifts in the field of mathematics; the Senior Whitehead prize may not be awarded to any person who has previously received the De Morgan Medal, Polya Prize, Senior Berwick Prize or the Naylor Prize.

**The Berwick Prize**, named after Professor W.E.H. Berwick, is awarded in odd-numbered years. The Berwick Prize is awarded to a mathematician who, on 1 January of the year of the award, is a member of the Society, is not already a Fellow of the Royal Society and has fewer than 15 years (full time equivalent) of involvement in mathematics at post-doctoral level, allowing for breaks in continuity, or in the opinion of the Prizes Committee is at an equivalent stage in their career. It is awarded in recognition of an outstanding piece of mathematical research actually published by the Society during the last eight years (up to

31 December 2006); and it may not be awarded to any person who has previously received the De Morgan Medal, the Senior Berwick Prize, the Senior Whitehead Prize, the Naylor Prize or a Whitehead Prize.

**The Whitehead Prizes** are awarded to mathematicians who on 1 January of the year of the award are normally resident in the United Kingdom or members of the Society mainly educated in the United Kingdom, who are not already Fellows of the Royal Society, and who have fewer than 15 years (full time equivalent) of involvement in mathematics at post-doctoral level, allowing for breaks in continuity, or who in the opinion of the Prizes Committee are at an equivalent stage in their career. Grounds for the award may include work in and influence on mathematics. This Prize may not be awarded to anyone who has won any of the Society's other Prizes. Members are reminded that the scope of the Whitehead Prizes (as of the other Society Prizes to be awarded in 2007) includes all aspects of mathematics, and Council has emphasised that this includes applied mathematics, mathematical physics and mathematical aspects of computer science.

**The Naylor Prize and Lectureship in Applied Mathematics** is awarded in even-numbered years, in memory of Dr V.D. Naylor. The Naylor Prize is awarded to a mathematician who is normally resident in the United Kingdom on 1 January of the year of the award. The grounds for the award may include work in, influence on, and contributions to applied mathematics and/or the applications of mathematics, and lecturing gifts. The Naylor Prize may not be awarded to any person who has previously received the De Morgan Medal, the Polya Prize, the Senior Berwick Prize or the Senior Whitehead Prize. The winner of the Naylor Prize is normally invited to give the Naylor Lecture at a Society meeting in the following year.

The award of the Fröhlich Lectureship and Forder Lectureship will be considered by the Programme Committee.

### LMS Newsletter

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Designed by CHP Design (tel: 020 7240 0466, email: [info@chpdesign.com](mailto:info@chpdesign.com), web: [www.chpdesign.com](http://www.chpdesign.com))

Publication dates and deadlines: published monthly, except August.

Items and advertisements by first day of the month prior to publication.

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Charity registration number: 252660.

## LMS DURHAM RESEARCH SYMPOSIA

The Research Meetings Committee is responsible for the planning of the LMS Durham Symposia, which have been running successfully each July/August since 1974, with 84 symposia to date, in a wide range of mathematical disciplines. In 2006 there were two Durham Symposia, both supported by EPSRC.

3–13 July: *Dynamical systems and statistical mechanics* (organisers: C. Beck, C. Dettmann and M. Pollicott)

11–21 August: *Methods of integrable systems in geometry* (organisers: F. Burstall, S. Dorfmeister, M. Guest, F. Pedit).

The Durham website ([www.maths.dur.ac.uk/events/Meetings/LMS/](http://www.maths.dur.ac.uk/events/Meetings/LMS/)) gives information about the above, and all previous symposia including, in many cases, a list of participants, abstracts of talks, a symposium photograph (the earliest surviving photograph is from 1976), lecture notes and, for more recent symposia, videos of the talks. The symposia in 2004 and 2005 were as follows:

- *Mathematical genetics* (R Griffiths, G. McVean)
- *L-functions and Galois representations* (D. Burns, K. Buzzard, J. Nekovář)
- *Topological solitons and their applications* (L. Brizhik, R. Ward, W. Zakrzewski).
- *Conformal field theory and string theory* (P. Bowcock, P. Dorey, K. Wendland)
- *Operator theory and spectral analysis* (B. Davies, Y. Safarov, E. Shargorodsky)

The LMS Research Meetings Committee welcomes ideas for symposia for 2008 and later, from potential organisers and others, who should contact the Chairman of the Committee, Professor A.J. Scholl ([a.j.scholl@dpmmms.cam.ac.uk](mailto:a.j.scholl@dpmmms.cam.ac.uk)). More information about Durham Symposia is available on the LMS website ([www.lms.ac.uk/activities/researchmeetcom/](http://www.lms.ac.uk/activities/researchmeetcom/)).

## LMS-EPSRC SHORT COURSES

We are pleased to report that the EPSRC has reached agreement with the LMS for continued funding of short courses for postgraduate students for a further three-year period (and potentially five years) beginning January 2007.

The courses are complementary to those that will be offered through EPSRC's recently announced integrated taught course centres. The centres are primarily offering broadening courses for students at the start of their PhD while the LMS courses are seen more as providing depth and breadth for students further on in their PhD training. Both are intended to increase the international academic competitiveness of the UK PhD, as identified in the International Review of Mathematics.

The Society has administered the short courses since 1999, since when over 30 courses have been successfully run. The courses provide a five-day residential lecture programme with material which should normally be accessible to first year PhD students. Each course aims to attract between 25–40 participants. Recent courses include:

- Mathematical Biology
- Euclidean Harmonic Analysis
- Stochastic Analysis
- Nonlinear Wave Phenomena
- Algebraic Topology
- Computational Differential Equations
- Optimal Stopping with Applications
- Methods of Non-equilibrium Statistical Mechanics in Turbulence

The Research Meetings Committee, which oversees the courses, would be pleased to have proposals and ideas for further courses from 2008. More information for potential organisers, or those suggesting a course, is on the website or they should contact the Short Courses Facilitator at: [adminoff@lms.ac.uk](mailto:adminoff@lms.ac.uk). Information about forthcoming courses is posted to all UK mathematics departments and appropriate email lists. For further information visit the website: [www.lms.ac.uk/activities](http://www.lms.ac.uk/activities) and click on the Research Meetings Committee link.

## LONDON MATHEMATICAL SOCIETY

### MARY CARTWRIGHT LECTURE

Friday 9 February 2007, University College London

3.30 – 4.30 P. Maini (Oxford)  
*Emergent Phenomena – Fact or Fiction?*

4.30 – 5.00 Tea

5.00 – 6.00 A. Stevens (Leipzig)  
**Mary Cartwright Lecture**  
*Interacting Cell Systems: An Example for Mathematical Modeling in the Life-Sciences*

There are limited funds available to contribute in part to the expenses of members of the Society or research students to attend the meeting. Contact Isabelle Robinson ([robinson@lms.ac.uk](mailto:robinson@lms.ac.uk)) for further information.

## LONDON MATHEMATICAL SOCIETY

### INVITED LECTURES 2007

**The Geometric Langlands Correspondence**  
David Ben-Zvi, University of Texas at Austin

**Mathematical Institute, Oxford, 10-14 April 2007**

This lecture series will explore the geometric Langlands program, a subject of much exciting recent activity at the interface of representation theory, algebraic geometry and quantum field theory. The lectures will assume a familiarity with first courses on Lie groups and algebraic varieties. Research students are particularly encouraged to attend.

Lectures will begin at 2.30 pm on Tuesday 10 April and will finish by lunchtime on Saturday 14 April. The main set of 10 lectures by David Ben-Zvi will be assisted by more specialized talks by Ian Grojnowski, Dmitriy Rumynin, Constantin Teleman and others.

All mathematicians are welcome to attend the lectures. There will be a registration fee of £30, payable on arrival. The registration fee will be waived for research students. Limited funds are available to support participants. Priority will be given to research students and mathematicians who would benefit from attending the lectures, but who would otherwise be prevented from attending by financial constraints. Please apply by **15 February 2007** using the online application form ([www.maths.ox.ac.uk/~szendroi/newlanglands.html](http://www.maths.ox.ac.uk/~szendroi/newlanglands.html)).

## BEIJING GAP

A Chinese member of the Association of Learned and Professional Society Publishers (ALPSP) is very keen to find young science graduates who would be interested in spending a year or so in Beijing, providing English-language editing for their high-quality science journals. They can offer a salary which is very comfortable by Chinese standards – this would be an exciting post-degree gap year experience for anyone who is interested in entering publishing! If you would like to pass this information on to final year students in your department, they should contact Xiao Hong (xiaohong@mail.sciencep.com) direct, preferably before the end of December.

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## RAMANUJAN PRIZE

Dr Ramdorai Sujatha of the Tata Institute of Fundamental Research, India is to receive the \$10,000 Ramanujan Prize for 2006. Dr Sujatha is awarded the prize in recognition of her work on the arithmetic of algebraic varieties and her substantial contributions to non-commutative Iwasawa theory. In particular, together with Coates, Fukaya, Kato and Venjakob, she formulated a non-commutative version of the main conjecture of Iwasawa theory, which now drives much of the work in this important subject.

The Ramanujan Prize was established at International Centre for Theoretical Physics (ICTP) in Trieste, Italy, to honour young mathematicians who have conducted outstanding research in developing countries. The award ceremony will take place on the 18 December at the ICTP in Trieste. The prize will be presented by Abel Laureate, Lennart Carleson.

The Ramanujan Prize is supported by the Norwegian Academy of Science and Letters through the Abel Fund, with the cooperation of the International Mathematical Union. For further information visit [www.abelprisen.no/en/](http://www.abelprisen.no/en/).

## MATHS TRIVIA

1. *Who is the only mathematician to win an olympic medal?*  
Harald Bohr, who worked on Dirichlet series and the Riemann zeta function, won a Bronze medal in the 1908 games when Denmark was third in the football.
2. *What do Dirichlet, Kummer and Hensel have in common (besides Number Theory)?*  
Dirichlet married Felix Mendelssohn's sister Rebecca. Kummer married Felix's cousin Ottilie. Hensel's grandmother was Fanny Mendelssohn, sister of Felix and a composer in her own right.

(See the excellent book *Prime Obsession* by John Derbyshire.)



David Singerman  
University of Southampton

## NUMBER 17


I have a football tee-shirt commissioned with the equation for the flight of a football on the front and Galileo's name on the back wearing the number 17 (the number I play in for my team). I thought readers of the LMS *Newsletter* might like to know about it. The link to the shirt is at: [www.philosophyfootball.com](http://www.philosophyfootball.com).

An obvious choice to bolster any side struggling to put the ball through the air and in the back of the net. Coming off the subs' bench, proudly wearing Fermat's Prime Number 17, Galileo solves the problem with superb positional sense. Once he knew the incoming ball's horizontal velocity  $u$  and vertical velocity  $v$ , he set  $y$  to be the perfect height off the ground for his volley then solved for  $x$  to discover where he should position himself. As a Florentine, Galileo quite obviously played in the purple of Fiorentina.

Marcus du Sautoy  
University of Oxford


## New Textbooks from Springer



**Bounded Analytic Functions**  
J. Garnett,  
University of California, Los Angeles, CA, USA

*The book, which covers a wide range of beautiful topics in analysis, is extremely well organized and well written, with elegant, detailed proofs. The book has educated a whole generation of mathematicians with backgrounds in complex analysis and function algebras. It has had a great impact on the early careers of many leading analysts and has been widely adopted as a textbook for graduate courses and learning seminars in both the US and abroad* ▶ **From the Citation for the 2003 Leroy P. Steele Prize for Exposition**


Revised 1st ed. 2007. XIV, 466 p. 31 illus. (Graduate Texts in Mathematics, Vol. 236) Hardcover  
ISBN 13 ▶ 978-0-387-33621-3  
ISBN 10 ▶ 0-387-33621-4  
▶ € 54,95 | £ 42,50



**Understanding and Using Linear Programming**  
J. Matoušek, Charles University, Prague, Czech Republic;  
B. Gärtner, ETH Zurich, Switzerland

What every theoretical computer scientist should know about linear programming! This introductory textbook focuses on applications of linear programming, both in practice and in theory.

2007. VIII, 222 p. (Universitext) Softcover  
ISBN 13 ▶ 978-3-540-30697-9  
ISBN 10 ▶ 3-540-30697-8  
▶ € 39,95 | £ 30,50



**Partial Differential Equations Vol. 1 Foundations and Integral Representations**  
F. Sauvigny, University of Cottbus, Germany

This comprehensive two-volume textbook covers the whole area of Partial Differential Equations – of the elliptic, parabolic, and hyperbolic type – in two and several variables. Special emphasis is placed on the connection of PDEs and complex variable methods.

2006. XIV, 437 p. 13 illus. (Universitext) Softcover  
ISBN 13 ▶ 978-3-540-34457-5  
ISBN 10 ▶ 3-540-34457-8  
▶ € 39,95 | £ 30,50

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**Lie Groups**  
An Approach through Invariants and Representations  
C. Procesi, University of Rome, Italy

2007. XXIV, 600 p. 18 illus. (Universitext) Softcover  
ISBN 13 ▶ 978-0-387-26040-2  
ISBN 10 ▶ 0-387-26040-4  
▶ € 49,95 | £ 38,50

**Vol 2 Functional Analytic Methods**

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ISBN 10 ▶ 3-540-34461-6  
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Science from Oxford

**OXFORD**  
UNIVERSITY PRESS

**FIELDS MEDAL WINNER 2006**  
**Solving Mathematical Problems A Personal Perspective**  
Terence Tao  
*I must say I find it delightful ... I have absolutely no doubt that the book will be popular.* -  
PROFESSOR W T GOWERS, UNIVERSITY OF CAMBRIDGE  
128 pages | July 2006 | PB | 978-0-19-920560-8 | £19.99 | HB | 978-0-19-920561-5 | £37.50

**Projective Geometry An introduction**  
Rey Casse  
*This lucid and accessible text provides an introductory guide to projective geometry, an area of mathematics concerned with the properties and invariants of geometric figures under projection.*  
216 pages | Aug 2006 | PB | 978-0-19-929886-0 | £24.95 | HB | 978-0-19-929885-3 | £50.00

**An Introduction to Quantum Computing**  
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*This concise, accessible introduction to quantum computing is aimed at advanced undergraduate and beginning graduate students from a variety of scientific backgrounds.*  
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*This clear, accessible textbook provides an introduction to both differential and integral equations. With numerous carefully worked examples and exercises*  
392 pages | Aug 2006  
PB | 978-0-19-929789-4 | £27.50 | HB | 978-0-19-853382-5 | £70.00

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Christopher Walton  
*This text looks at the construction of the Semantic Web, which will enable computers to automatically and independently consume Web-based information.*  
272 pages | Oct 2006 | HB | 978-0-19-929248-6 | £29.95

For more information and ordering details,  
please visit [www.oup.co.uk/academic/science](http://www.oup.co.uk/academic/science)

## EPSRC NEWS

### Taught Course Centres for PhD Students in Mathematical Sciences

As a result of the recent call, EPSRC has funded five centres covering the whole of the mathematical sciences remit. The centres are:

- Scottish Mathematical Training Centre – A taught course centre for UK PhD students: A. Carbery (University of Edinburgh)
- A Taught Course Centre for the Mathematical Sciences based at Oxford, Warwick, Imperial, Bath and Bristol: M. Lackenby (University of Oxford); M. Pollicott (University of Warwick); J. Pile (University of Bristol), J. Gibbons (Imperial College), A. Spence (University of Bath)
- MAGIC (Mathematics Access Grid: Instruction and Collaboration): N. Strickland (University of Sheffield), J. Gajjar (University of Manchester)
- A National Taught Course Centre in Operational Research (NATCOR): K. Glazebrook (Lancaster University)
- Academy for PhD Training in Statistics (APTS): W.S. Kendall (University of Warwick)  
All the courses will start in October 2007 and all centres will be making their material available electronically in some form or other; they will also have information on their web pages. Many of the consortia are delivering courses remotely so it may be possible for departments not involved in these consortia to link in with them if they have the appropriate technology. Other consortia are giving physical lectures and, again, it may be possible for your students to join them. For further information, contact the co-ordinators.

### New Academics Initiative

EPSRC has launched a new activity entitled New Academics. The aim is to make it less daunting for early stage career academics to contact EPSRC and get information on our funding schemes.

The scheme has two parts: An email address ([NewAcademics@epsrc.ac.uk](mailto:NewAcademics@epsrc.ac.uk)) is publicised on posters and fliers sent to research offices and heads of departments. When researchers contact this email address they will receive a response containing information of the First Grant Scheme, general information on EPSRC, and details of how to contact relevant staff within EPSRC for more help. There will be links to useful pages on the website, including the New Academics dedicated webpages. Where necessary this response e-mail will be tailored to answer any specific questions that researchers may have, and to give the contact details of appropriate EPSRC contacts.

The New Academics webpages ([www.epsrc.ac.uk/newacademics](http://www.epsrc.ac.uk/newacademics)) are designed to be a central repository for all information relevant to early stage career researchers. They include links to other pages as well as hints and tips to aid those preparing their first application for funding. If you wish to discuss this initiative further, or would like more information, please contact Dr Katie Finch ([Katie.Finch@epsrc.ac.uk](mailto:Katie.Finch@epsrc.ac.uk), tel: 01793 444 097).

### Computational Engineering Mathematics (CEM)

There has been a review of the 6-year joint mathematics/engineering managed programme which started off as the CPDE initiative (Computational Partial Differential Equations) and was renamed after the second year as the CEM Initiative. This report will be on our web-site in the next two weeks. More importantly, we have produced a research highlights booklet which contains six case studies of research supported through that initiative. If you would like a copy email [Laura.Donovan@epsrc.ac.uk](mailto:Laura.Donovan@epsrc.ac.uk).

### Mathematical Sciences CASE Projects call 2007

The Mathematical Sciences Programme CASE project studentship exercise will continue to run in 2007. Applications for collaborative projects in mathematics, statistics and operational research with a non-academic partner

are invited. There will be a maximum of 20 awards. Applicants seeking CASE project studentships should complete a Mathematical Sciences CASE Project Application Form for each studentship. The original plus six copies of the form and the case for support should be sent in hard copy to the EPSRC Mathematical Sciences Programme by **8 December 2006**.

#### Maths for Engineers Summer Schools

EPSRC plans to invest £300k on the development of a series of training courses aimed at increasing the mathematical competencies of UK postgraduate engineers, and exposing them to the latest mathematical techniques. Proposals for summer schools are sought to address specific areas of engineering research. The aim of this initiative is to:

- Provide postgraduate students with a greater understanding and knowledge of contemporary mathematical techniques in core areas of engineering research;
- Provide an opportunity for Engineering PhD students to network with fellow students, academic tutors and where appropriate industrialists.

Summer Schools should focus on a specific engineering topic of benefit to at least 30 UK based engineering PhD students. Each Summer School should:

- Focus on the underpinning mathematical techniques required for the identified engineering theme, covering the newest mathematical methods/techniques available.
- Be run as a collaborative effort between Engineers and Mathematicians, and could involve applicants from multiple institutions.
- Where appropriate involve industry, to demonstrate the application of mathematical techniques.

Closing date for applications: **4 pm on 5 December 2006**.

Please see the EPSRC website for full details of all calls, announcements and information: [www.epsrc.ac.uk](http://www.epsrc.ac.uk).

#### Message from Annette Bramley, Programme Manager for Mathematical Sciences

I am writing to let you all know that I will shortly be leaving the Mathematical Sciences Programme at EPSRC to take up the role of Engineering Programme Manager. My successor will be Mr David Harman, who brings with him a wealth of experience from many years at EPSRC.

It has been a pleasure and a privilege to work with the Mathematics, Statistics and OR communities for the past three and a half years. I have always enjoyed my interactions with the mathematical sciences community, particularly through visits to institutions. I am very excited about the substantial EPSRC investments in the Mathematical Sciences following the International Reviews and although I will no longer be directly involved I will be following the progress here with interest! I was so inspired by the way the Mathematical Sciences community came together to put forward the suite of taught course centres for PhD students which I hope will really offer our PhD students a new training experience.

I would like to thank you all for your support and input during my time as Programme Manager and hope that our paths will cross again at some point in the future.

With very best wishes,  
Annette

#### PROBABILITY, STATISTICS & FINANCIAL STOCHASTICS

Middlesex University is organising an international workshop on *Recent advances in probability, statistics and financial stochastics* to be held on 18-19 December in the Drawing Room in the Mansion at Trent Park campus. The workshop is supported by a grant from LMS. Further details at <http://mubs.mdx.ac.uk/conferences/PSFS/>.

## Do the Math

### Hadamard Matrices and Their Applications

K. J. HORADAM

*Hadamard Matrices and Their Applications* provides the first unified account of cocyclic Hadamard matrices and their applications in signal and data processing. This original work is based on the development of an algebraic link between Hadamard matrices and the cohomology of finite groups that was discovered fifteen years ago. The book translates physical applications into terms a pure mathematician will appreciate, and theoretical structures into ones an applied mathematician, computer scientist, or communications engineer can adapt and use. Pointing the way to possible new developments in a field ripe for further research, this book formulates and discusses ninety open questions.

Cloth \$55.00 £35.95 0-691-11921-X

### Integration of One-forms on P-adic Analytic Spaces

VLADIMIR G. BERKOVICH

This book aims to show that every smooth p-adic analytic space is provided with a sheaf of functions that includes all analytic ones and satisfies a uniqueness property. The book also contains local primitives of all closed one-forms with coefficients in the sheaf that, in the case considered by Coleman, coincide with those he constructed. The book is aimed at graduate students and mathematicians working in the areas of non-Archimedean analytic geometry, number theory, and algebraic geometry.

*Annals of Mathematics Studies*: Phillip A. Griffiths, John N. Mather, and Elias M. Stein, series editors  
Paper \$35.00 £22.95 0-691-12862-6  
Cloth \$70.00 £45.00 0-691-12741-7  
Due February 2007

#### NEW IN PAPERBACK

### Strange Curves, Counting Rabbits, and Other Mathematical Explorations

KEITH BALL

272 pages, 90 line illus, 11 tables, 6 x 9.

Paper \$18.95 £12.50 0-691-12797-2

Not available from Princeton in South Asia

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PAUL J. NAHIN

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## VISIT OF PROFESSOR I.S. BORISOV

Professor I.S. Borisov (Institute of Mathematics, Novosibirsk) will be visiting the UK during December supported by an LMS scheme 2 grant. Professor Borisov is a specialist in the theory of stochastic processes and random measures (Poisson, compound Poisson and Gaussian approximations). He will give lectures at:

- University of Leeds, 8 December (contact A. Veretennikov: email [veretenn@maths.leeds.ac.uk](mailto:veretenn@maths.leeds.ac.uk))
- University of Leicester, 12 December (contact: M. Tretyakov: email [m.tretyakov@le.ac.uk](mailto:m.tretyakov@le.ac.uk))
- University of Nottingham, 14 December (contact: S.A. Utev: email [Sergey.Utev@nottingham.ac.uk](mailto:Sergey.Utev@nottingham.ac.uk))

For further information contact Dr S. Novak, Middlesex University (email: [S.Novak@mdx.ac.uk](mailto:S.Novak@mdx.ac.uk), tel: 0208 4114258, fax: 0208 4114258).

## YORKSHIRE AND DURHAM GEOMETRY DAY

There will be a Yorkshire and Durham Geometry Day on Monday 12 January from 11:00 am to 5:15 pm in the Willmore Room in the Department of Mathematical Sciences, Durham University. Talks will be given by:

- Dmitri Alekseevsky (Edinburgh)
- Simon Donaldson (Imperial College London)
- Tim Perutz (Cambridge)
- Luc Vrancken (Valenciennes)

All interested are welcome to attend, although the organisers would appreciate your letting them know if you plan to come. For further information email John Bolton ([john.bolton@durham.ac.uk](mailto:john.bolton@durham.ac.uk)) or Wilhelm Klingenberg ([wilhelm.klingenberg@durham.ac.uk](mailto:wilhelm.klingenberg@durham.ac.uk)), or visit the website [www.maths.dur.ac.uk/dma0jb/ydgd.html](http://www.maths.dur.ac.uk/dma0jb/ydgd.html). The Yorkshire and Durham Geometry Days are supported by an LMS grant.

## INTERNATIONAL CENTRE FOR MATHEMATICAL SCIENCES

### Call for Proposals

Proposals are now invited for workshops to be held at the International Centre for Mathematical Sciences (ICMS) in Edinburgh in 2008. ICMS particularly welcomes proposals for workshops in rapidly-developing and newly-emerging areas where there is a need to evaluate new developments quickly.

The Programme Committee will consider proposals three times each year: in December, July and March. Submissions will be accepted at any time but applicants should allow sufficient time (we recommend three clear months) for proposals to be reviewed and for the proposers to react to the referees' comments.

The current round of proposals should be received by the last day of March 2007 in order to be considered at the Programme Committee meeting in July 2007. Organisers can expect to receive comments from reviewers about 8 weeks after the submission deadline.

Applicants should bear in mind the time needed to plan the meeting if a proposal is accepted for inclusion in the ICMS Workshop Programme. Small meetings can be organised in 6-8 months from acceptance; others may require at least 12 months planning.

Potential organisers should contact ICMS as early as possible to discuss ideas before submitting a firm proposal. The proposal document should not normally exceed five pages and should be submitted electronically (PDF, PS, Word or DVI). Full instructions on how to submit a proposal, together with details of the refereeing process and criteria for selection, can be found on these web pages: <http://icms.org.uk/proposals.php>.

Successful applicants will be offered a funding package to contribute to the travel

and subsistence of a proportion of the participants. ICMS staff will undertake all non-scientific administration connected with the workshop. One of the Scientific Organisers (often an author of the initial proposal) will be appointed Principal Organiser and be the main point of contact.

For enquiries about ICMS or the procedures for submitting a proposal, please contact Morag Burton, Workshops Co-ordinator, ICMS ([morag.burton@icms.org.uk](mailto:morag.burton@icms.org.uk)).

## ISAAC NEWTON INSTITUTE Call for Proposals

The Isaac Newton Institute for Mathematical Sciences is a national research institute in Cambridge. It aims to bring together mathematical scientists from UK universities and leading experts from overseas for concentrated research on specialised topics in all branches of the mathematical sciences from pure mathematics, applied mathematics and statistics, to theoretical aspects of any discipline.

At any time there are two visitor programmes in progress, each with about twenty scientists in residence. Included within these programmes are periods of particularly intense activity including instructional courses and workshops. Seventy-seven programmes have now been completed, the most recent being *The Painlevé Equations and Monodromy Problems* and *Spectral Theory and Partial Differential Equations*. The programmes currently taking place are *Noncommutative Geometry and Stochastic Computation in the Biological Sciences*.

The Institute invites proposals for research programmes in any branch of mathematics or the mathematical sciences. The Scientific Steering Committee usually meets twice each year to consider proposals for programmes (of 4-week, 4-month or 6-month duration) to run two or three years later. Proposals to be considered at these meetings should be sub-

mitted by **31 January** or **31 July** respectively. Information is available at [www.newton.cam.ac.uk/callprop.html](http://www.newton.cam.ac.uk/callprop.html).


## MATHEMATICAL WEEKENDS

Over the last few years the European Mathematical Society has been holding occasional 'joint mathematical weekends'. These start on a Friday, and finish on the Sunday, both at lunchtime, so that they can be attended during term-time. Each covers around four subjects, chosen by the local organisers to fit the research strengths of the local mathematicians, or new subjects they would want to develop. For each subject, a plenary lecture and two half-days of parallel sessions are organised.

There have been five such events held since 2003. They are listed at [www.emis.de/etc/former-weekends.html](http://www.emis.de/etc/former-weekends.html) and [www.math.sciences.univ-nantes.fr/WEM2006](http://www.math.sciences.univ-nantes.fr/WEM2006). Note that none has been held in the UK. Programme Committee would like to hear from any Department in the UK which would like to consider hosting an EMS mathematical weekend within the next few years. Contact Stephen Huggett, Programme Secretary ([huggett@plymouth.ac.uk](mailto:huggett@plymouth.ac.uk)).

## UK-JAPAN WINTER SCHOOL 2007

The UK-Japan Winter Schools have been held since 1999. Every year the focus is on a special topic. For the next Winter School the topic will be *Number Theory*. The aim of the School is to bring together Japanese and UK scientists, in particular also young researchers and students from mathematics and mathematical physics, in a relaxing and stimulating atmosphere. It will be held 7-10 January at the Centre for Mathematical Sciences, Cambridge. For further information visit the website <http://euclid.ucc.ie> and click on the link.

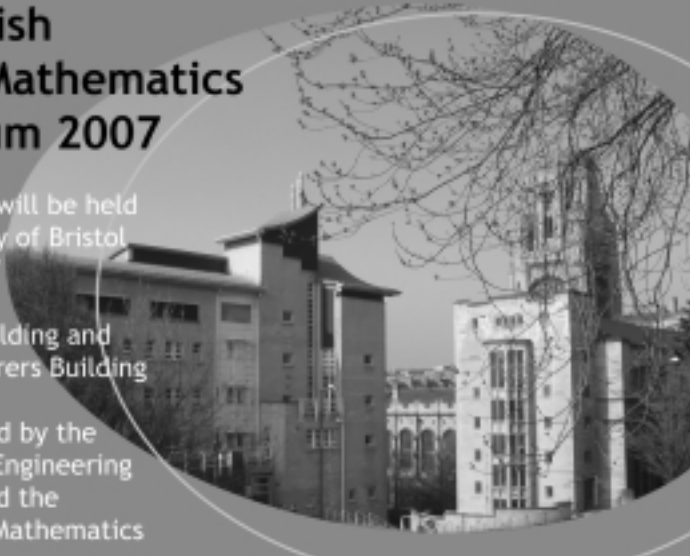



## 49th British Applied Mathematics Colloquium 2007

The 49th BAMC will be held at the University of Bristol 17-19 April 2007

Venue: Wills Building and Merchant Venturers Building

Jointly organised by the Department of Engineering Mathematics and the Department of Mathematics

**Invited Speakers**  
Ann Dowling (Cambridge)  
Gregory Falkovich (Weizmann Institute)  
Philip Holmes (Princeton)  
Mark Newman (Michigan)  
Michael Ortiz (Caltech)  
Howard Stone (Harvard)

**Co-Chairs**  
John Hogan  
Rich Kerswell

For further information (including suggestions for minisymposia), or if you wish to be added to our mailing list, please email: [bamc-2007@bristol.ac.uk](mailto:bamc-2007@bristol.ac.uk)

[www.bris.ac.uk/bamc2007/](http://www.bris.ac.uk/bamc2007/)

## EUROPEAN WOMEN IN MATHEMATICS

### First Announcement

The 13th general meeting of European Women in Mathematics (EWM07), open to members and non-members of EWM, will take place at the Centre for Mathematical Sciences (CMS), University of Cambridge from lunchtime on Monday 3 September to lunchtime on Thursday 6 September 2007. Accommodation has been arranged at Fitzwilliam College, Cambridge.

Many have been amazed and encouraged by the experience of attending an EWM conference, never having previously been part of a group of over 100 women listening intently to a talk on state-of-the-art mathematical research, or had the opportunity to meet and talk to women mathematicians in a variety of fields. The conferences have sparked collaborations, follow-on meetings on related themes and, most importantly, have inspired many women from graduate students to professors as they develop their careers as working mathematicians.

Talks at EWM07 will cover a range of mathematical areas. The invited speakers are among the very best in their areas of research, and we hope that there will be something to interest all mathematicians. Confirmed speakers so far include:

- Natalia Berloff (Cambridge, UK) *Quantum fluids*
- Lenore Blum (Carnegie Mellon University, USA) *Theoretical Computer Science*
- Simone Gutt (Univ. Libre de Bruxelles) *Symplectic Geometry*
- Eleny Ionel (Stanford, USA) *Symplectic Geometry*
- Dusa McDuff (Stonybrook, USA) *Symplectic Geometry*
- Cheryl Praeger (University of Western Australia) *Group Theory*
- Vera Sos (Budapest) *Combinatorics*

There will also be a session on mathemati-

cal education, with a talk given by Toni Beardon (Cambridge, UK) speaking on the impact of computers and the internet on globalising mathematics education. In addition there will be an afternoon devoted to short talks and posters from PhD and post-doctoral students, which will have parallel sessions. A discussion on the role and future of EWM is also planned.

A conference banquet has been arranged at Trinity College, Cambridge on Wednesday 5th September. There will also be receptions at Newnham College and at the Master's Lodge, Trinity College on the other evenings. Participants will have the chance to go on a punting trip on the river in Cambridge. The aim is to provide some childcare during the conference.

There is a registration fee of £60 (£30 for students) for the conference. The conference dinner costs around an extra £35 per person. We may be able to reduce these costs if sufficient sponsorship is found. Accommodation at Fitzwilliam College costs between £29.00–£41.60 per night (€42.50–€61.00) for bed and breakfast, depending on facilities.

The Organising Committee hopes to obtain some funding for participants, particularly students and participants from developing countries. In addition, opportunities are available for women from developing countries to visit the ICTP in Trieste for a few weeks around the time of this conference. Please let us know if you would be interested in applying for such a visit.

Organizing Committee: Eva Bayer (Lausanne, Switzerland), Anne Davis (Cambridge, UK), Catherine Hobbs (Oxford Brookes, UK), Marjo Lipponen-Sahli (Turku, Finland), Ursula Martin (Queen Mary, London, UK), Sylvie Paycha (Blaise Pascal, Clermont Ferrand, France) Caroline Series (Warwick, UK).

If you are interested in attending the meeting, please email Amanda Stagg ([ewm07@maths.cam.ac.uk](mailto:ewm07@maths.cam.ac.uk)). For further information visit the website: [www.maths.cam.ac.uk/ewm](http://www.maths.cam.ac.uk/ewm).



## BMC07 SWANSEA 16–19 April 2007

The programme for the BMC07 is now more or less fixed. We expect as Plenary Speakers:

- H.D. Cao (Lehigh University)
- A. Connes (Collège de France)
- H. McKean (Courant Institute)
- D. Stroock (MIT)

The meeting will be opened by Professor R. Davies, VC Swansea University, on 16 April 2007. As 15 April 1707 is the birthday of Leonard Euler, Ivor Grattan-Guinness has agreed to give a lecture on a topic related to Euler. We have confirmation as Morning Speakers of J. Bergstra (Amsterdam), D. Calderbank (York), F. Leader (Cambridge), T. Leinster (Glasgow), J. Marklof (Bristol), P. Mörters (Bath), Z. Qian (Oxford), M. Rathjen (Leeds), M. Singer (Edinburgh), A. Sobolev (Birmingham), D. Vassiliev (UCL), K. Wendland (Warwick).

Many colleagues across the UK have agreed to help to organise Splinter Groups. Topics include: Combinatorial Algebra and Representation Theory, Number Theory, Functional Analysis, Probability Theory, Geometric and Algebraic Methods in Physics, Partial Differential Equations, Differential Geometry, Random Matrices, Logic and Theoretical Computer Science, History of Mathematics.

There will also be an open splinter group. Anyone who wants to add to this part of the programme by arranging a further splinter group is invited to contact [bmc@swansea.ac.uk](mailto:bmc@swansea.ac.uk) as soon as possible. We expect that the two Special Sessions

- Algebraic Topology (J. Greenlees)
- Harmonic Analysis (A. Carbery, J. Wright) will make an outstanding contribution to the scientific programme. Beyond the scientific programme there will be other events such as:
- Students' Conference (organised by T. Brzezinski)

- Round Table: Publishing in the Future (organised by S. Hezlet)
- Presentation of the British Mathematical Olympiad Committee

We will also have a more extended outreach programme. It is a pleasure to announce a Public Lecture by Caroline Series. Moreover, during the BMC07 Techniquet/mathcymru will organise lectures and events for school children on our Campus. This will include a fun lecture by our own David Williams.

Many publishers have already agreed to participate in the book exhibition – a service much appreciated.

Last, but not least, we are grateful that Ken Brown has agreed to a Session on the RAE2008. This session will be on Tuesday evening when Ken will be joined by Caroline Series and John Greenlees, two colleagues with long standing relations with the BMC. The sessions will be chaired by John Toland, President of the LMS.

On behalf of all my colleagues in Swansea, I would like to invite every member of the LMS to participate and contribute to the BMC07.

Looking forward to meeting you in Swansea. More information is on the web at: [//bmc.swansea.ac.uk](http://bmc.swansea.ac.uk).

Niels Jacob

## NONCOMMUTATIVE DAY

A *Noncommutative Day* will be held on Thursday 7 December from 14:00–17:30 at the Department of Mathematics, Imperial College London. The speakers are:

- J. Brodzki (Southampton) *Topological invariants of noncommutative spaces*
- I. Krolak (Wroclaw) *Ornstein-Uhlenbeck semigroup for general commutation relations*
- D. Petz (Budapest) *Noncommutative probability*
- V. Turunen (Helsinki) *Pseudo-differential operators on Lie groups*

For further information contact B. Zegarinski ([b.zegarinski@imperial.ac.uk](mailto:b.zegarinski@imperial.ac.uk)) or visit the website [www.ma.ic.ac.uk/~boz/ND06/ND06.html](http://www.ma.ic.ac.uk/~boz/ND06/ND06.html). The host institution would like to acknowledge the support of London Mathematical Society Scheme 3 grant which makes this meeting possible.

## OPEN UNIVERSITY WINTER COMBINATORICS MEETING

The 2007 Open University Winter Combinatorics Meeting will be held on Wednesday 24 January in the Christodoulou Meeting Room 11 (CMR 11) on the Open University campus in Milton Keynes. All are welcome and coffee will be available from 10.15 am. The speakers will be:

- Bill Jackson (Queen Mary) *Compatible circuit decompositions of 4-regular graphs*
- Daniela Kühn (Birmingham) *Generalized matching problems*
- Imre Leader (Cambridge) *Intersecting families of permutations*
- Vassili Mavron (Aberystwyth) *Regular Hadamard matrices, codes and quasi-symmetric designs*
- John Talbot (UCL) *G-intersecting families of sets*

For further information visit <http://pure.maths.open.ac.uk/combin>, or contact Mike Grannell ([M.J.Grannell@open.ac.uk](mailto:M.J.Grannell@open.ac.uk)) or Terry Griggs ([T.S.Griggs@open.ac.uk](mailto:T.S.Griggs@open.ac.uk)). The organisers gratefully acknowledge the support of the British Combinatorial Committee.

## ANALYSIS AND SINGULARITIES

An international conference on *Analysis and Singularities* will be held at the Steklov Mathematical Institute, Moscow, from 20–24 August 2007, dedicated to the 70th birthday of Vladimir Igorevich Arnold. The topics will be: Algebraic Geometry, Singularity Theory, Differential Equations, Mechanics,

Hydrodynamics, Number Theory. The list of invited speakers includes:

- A. Agrachev (Trieste, Italy)
- J. Palis (IMPA, Brasil)
- A. Varchenko (Chapel Hill, USA)
- O. Viro (Uppsala, Sweden)
- B. Khesin (Toronto, Canada)
- E. Shustin (Tel Aviv, Israel)
- P. Biran (Tel Aviv, Israel)
- S. Novikov (Maryland, USA and Moscow, Russia)
- Ya. Sinai (Princeton, USA)
- V. Goryunov (Liverpool, UK)
- S. Kuksin (Edinburgh, UK)
- D. McDuff (Stony Brook, USA)
- A. Vershik (St Petersburg, Russia)
- V. Kharlamov (Strasbourg, France)
- D. Siersma (Utrecht, Holland)
- J. Steenbrink (Nijmegen, Holland)

For further information contact the Steklov Mathematical Institute, Gubkina 8, Moscow 119991, Russia (email: [Arnold-70@mi.ras.ru](mailto:Arnold-70@mi.ras.ru); website: <http://arnold-70.mi.ras.ru>).



REVIEW

**James Joseph Sylvester: Jewish Mathematician in a Victorian World** by Karen Hunger Parshall, Johns Hopkins University Press, 2006, pp 544, £46.50, ISBN 0801882915

James Joseph Sylvester (1814–1897) was one of the giants of 19th century mathematics, serving (among many other offices) as second President of the London Mathematical Society and being awarded (among many other prizes) the second De Morgan Medal. Over the course of his life, he saw the development of what we now see as the academic mathematician, a position that did not exist when he was young and a position that he filled admirably when he was older.

Let me begin by saying that I found this to be a thoroughly enjoyable read. This is not a mathematical biography, in that the details of Sylvester's mathematics are not explored in any significant depth, although the reader will get a reasonable idea of the scope and breadth of

Sylvester's work. However, this is not a defect, as this biography serves a different purpose. While it would be interesting to have a mathematical biography of Sylvester, in which his mathematical contributions are explained in some depth and are put in the context of current mathematical work, this volume plays the different and equally vital role of exploring the cultural and social context in which Sylvester worked and that shaped his career.

The subtitle of this biography is *Jewish Mathematician in a Victorian World*, and this aspect of Sylvester proved to be the major influence shaping his professional life. Although he attended Cambridge University, he was not awarded a degree because of his Jewishness, and he was not considered for a fellowship during which he could continue his mathematical work. While the effect of being Jewish was not always overt, it rippled through the whole of Sylvester's life.

Sylvester wanted to find a position in which he could do mathematics and in which he could explore the process of discovering new mathematics with like-minded colleagues and students. Those of us who currently work in universities will be sympathetic to some of the incidents in his career and some of the battles he fought, and it is interesting to note that some of the same issues that vexed Sylvester continued to vex academics to this day.

During his life, he held a number of university positions, as well as serving for many years as an actuary, in which role he was instrumental in the establishment of the Institute of Actuaries, which continues to regulate the actuarial profession today. It was not until near the end of his career, when he was Professor of Mathematics at the then newly-founded Johns Hopkins University and then Savilian Professor of Geometry at the University of Oxford, that he found a position where he could focus exclusively on the mathematics he had spent his life exploring.

The author has done an excellent job of setting Sylvester's story in the context of his

time. She has previously edited a volume on Sylvester's voluminous correspondence and uses this knowledge of the man and his times to good effect. There are extensive historical notes and a bibliography of Sylvester's work. For anyone interested in gaining a feel for the practice of mathematics in the 19th century as well as understanding one of its major figures, this is a book to consider reading.

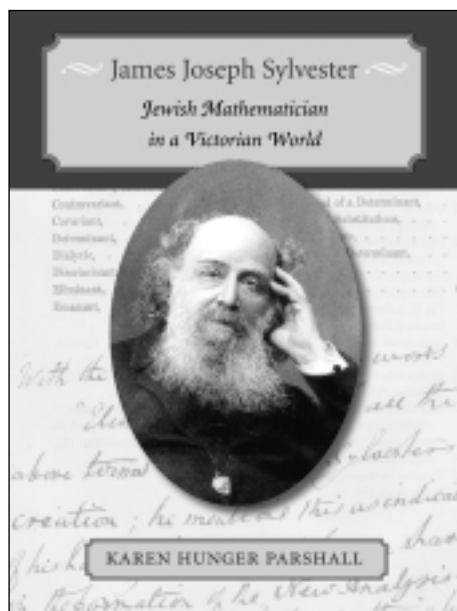
J.W. Anderson  
University of Southampton


WEBSITES

This is the first of an occasional series of short pieces on websites which *Newsletter* readers may find interesting, diverting, or both. I am by no means a connoisseur, and would welcome contributions. (Without them, this series will be very occasional!) Remember that you can read this on the net, where these sites are just a click away.

1. At the Madrid ICM this summer the International Mathematical Union adopted a new logo, and here is the web site describing it. A very good video describes the geometry of the logo. <http://torus.math.uiuc.edu/jms/Images/IMU-logo/>
2. Here is a wonderful edition of Euclid's Elements, in which a Java applet illustrates the diagrams. This is a very good use of the software, making the meanings of the propositions more immediate. <http://aleph0.clarku.edu/~djoyce/java/elements/elements.html>
3. Here is an old arithmetic trick, but very well presented. It comes, perhaps rather unexpectedly, from a graphic designer in Tehran! [www.milaadesign.com/wizardy.html](http://www.milaadesign.com/wizardy.html)
4. Finally, arising from the Sokal affair, the hilarious automatic essay: [www.elsewhere.org/cgi-bin/postmodern](http://www.elsewhere.org/cgi-bin/postmodern)

Stephen Huggett  
University of Plymouth





**UNIVERSITY OF  
CAMBRIDGE**

**The Winton Professorship of the Public Understanding of Risk**

Applications are invited for the Winton Professorship of the Public Understanding of Risk. The successful applicant will be active in an area of mathematical science involving risk, and will develop a programme in some aspect of the public understanding of risk. Preference will be given to individuals active in theoretical/applied aspects of probability and statistics.

Details of the post and of the application process are available at <http://www.statslab.cam.ac.uk/Vacancies/>. Applicants should include details of their current and future research plans, and their proposal for a programme in the public understanding of risk.

Informal enquiries may be made to the Head of the Department of Pure Mathematics and Mathematical Statistics, Professor Geoffrey Grimmett (email: [helen@dpmms.cam.ac.uk](mailto:helen@dpmms.cam.ac.uk)). The closing date is 12 January 2007.

**MATHEMATICIANS VISITING THE UK IN 2006/2007**

**Aberdeen University**

Saito, K. (Japan) June 06 – Feb 07

**Bath University**

Dereich, S. (Technical University Berlin) *Probability*, Apr 07 – Mar 08

McLean, W. (University of New South Wales, Australia) *Numerical Analysis/PDEs*, Jan – Jul 07

**Brunel University**

Chkadua, O. (Georgian Academy of Sciences, Tbilisi, Georgia) *Theory of Pseudo-Differential Operators; Mixed Boundary Value Problems of Elasticity, Theory of Cracks, Asymptotic Properties of Solutions in a Neighborhood of Singular Points*, one month 07

Every, A.G. (Wits University, SA) *Wave Propagation*, dates tba

Natroshevili, D. (Georgia Technical University, Tbilisi, Georgia) *Partial Differential Equations and Integral Equations, Boundary Value Problems of Solid Mechanics*, one month early 07

**Cambridge University (DPMMS)**

Fukaya, T. (Keio University, Japan) *Number Theory*, Feb 06 – Feb 08

Grambsch, P. (University of Minnesota) *Biostatistics*, 1 Jan – 31 Dec 07

Ishigami, Y. (University of Electro-Communications, Tokyo) *Combinatorics*, 1 Apr 06 – 31 Mar 07

Miermont, G. (CNRS, Paris) *Probability*, 1 Oct – 31 Dec 06

Pelosi, M.K. (Western New England College, USA) *Statistics*, 1 Jan – 30 Jun 07

Taqi Ali, I. (Kuwait University) 1 Sep 07 – 31 Aug 08

Wassermann, A. (Marseilles, France) *Algebra*, 1 Oct – 31 Dec 06

**Cambridge University (DAMTP)**

Adesso, G. (Dipartimento di Fisica 'E.R. Caianiello', University of Salerno) *Quantum Information*, Oct 06 – Jan 07

Monaghan, J. (Monash University) *Fluid Dynamics*, 1 Mar – 1 Sep 07

Sasaki, S. (Physiological Flow Studies Laboratory, Tohoku University) *Fluid Dynamics*, Sep 06 – Sep 07

**Durham University**

Curtright, T. (Miami, USA) 10 Jun – 7 Jul 07

Jordan, P. (NASA Stennis Space Center, USA) *Numerical Analysis*, Epiphany Term 07

Kao, H-C. (National Normal University, Taiwan) Aug 06 – Aug 07

Pollet, P. (Queensland, Australia) 29 Apr – 27 May 07

Zuleta, K. (EPFL, Lausanne, Switzerland) Oct 06 – Oct 07

**Edinburgh University**

Blasco, O. (Universidad De Valencia) *Analysis*, 21 Aug 06 – 31 Mar 07

**Glasgow University (Mathematics)**

Hartman, F. (Villanova University, PA, USA) *Algebra*, 1 Sep – 31 Dec 06

**Heriot-Watt University**

Last, G. (University of Karlsruhe, Germany) *Probability Theory, Applied Probability*, 15 Feb – 15 Apr 07

Puhalskii, A. (University of Colorado, USA) *Probability Theory, Applied Probability*, Jan – Dec 06

**Imperial College London**

Chan, Y.M. (University of Hong Kong) *Differential Geometry*, 24 Jan 06 – 31 Jan 08

El Ghany, H.H.A. (Industrial Education College, Helwan University, Cairo, Egypt) *Generalised Moment Problem*, 15 Oct 06 – 30 May 07

Hindberg, H. (University of Tromsø, Norway) *Statistical Signal Processing, Nonstationary Complex-valued Stochastic Processes and Time-frequency Analysis*, 1 Jan – 30 Dec 07

James, G. (Institut National des Sciences Appliquées, France) *Travelling Waves in Lattice Dynamical Systems*, 13 Nov – 22 Dec 06

Koltsova, O. (Nizhny Novgorod State University, Russia) *Dynamical Systems*, 19 Sep 06 – 31 Jan 07

Luo, J.S. (Tianjin University China) *Theoretical and Computational Fluid Mechanics with particular interest in hydrodynamic instability and transition to turbulence*, Oct 26 – Dec 06

Polizzi, F. (Universita della Calabria, Italy) *Algebraic Surfaces*, 5 Sep 06 – 5 Jan 07

Strojby, J. (Lund University, Sweden) *Mathematical Finance*, 28 Sep – 1 Dec 06

**Lancaster University**

Orr, J.L. (University of Lincoln, Nebraska) *Operator Algebras*, 3 Jan – 3 Jul 07

**Leeds University**

Grabner, S. (Pomona College, California, USA) *Banach Algebras*, 10 Jan – 7 Jun 07

Angsheng Li (Chinese Academy of Sciences, Beijing) *Logic and Computability Theory*, 1 Feb – 1 Mar 07

Dinh Nho Hao (Hanoi Institute of Mathematics and Free University of Brussels) *Inverse Problems*, 2 Nov – 15 Dec 06

Zhonggen Su (Zhejiang University) *Applied Probability, including Random Partitions and Related Topics*, 1 Jan 06 – 16 Jan 07

**Leicester University**

Milstein, G.N. (Ural State University, Ekaterinburg, Russia) *Stochastic Numerics, Estimation, Control, Stability Theory*, 1 Dec 06 – 3 Mar 07

**Liverpool University**

Gusseinzade, S.M. (Moscow State Lomonosov University, Russia) *Singularity Theory*, 22 Jan – 12 May 07

**Loughborough University**

Ruijsenaars, S. (Centre for Mathematics & Computer Science, Amsterdam) *Theory of Analytic Difference Equations and Special Functions*, 1 Oct 06 – 31 Jan 07

**Manchester University**

Lancaster, P. (University of Calgary) *Matrix Analysis*, Dec 06 – Mar 07

**Nottingham University**

Chini, G. (University of New Hampshire, USA) *Environmental and Biological Fluid Mechanics*, 1 Jul – 31 Dec 06

Meyer, J. (Technical University Berlin) *Complex Analysis*, 1 Sep 06 – 31 Aug 08

**Oxford University (Mathematical Institute)**

Almeida, P.J. (Portugal) *Number Theory*, 1 Jan – 31 Dec 07

Baptista, J. (Portugal/Cambridge) *Theoretical Physics*, 1 Oct 06 – 30 Sep 07

Caprace, P-E. (Brussels) *Algebra and Geometry*, 1 Oct 06 – 30 Jun 07

Caspi, A. (Berkeley) *Computational Biology*, 19 Sep 06 – 30 Apr 07

Escudero Liebana, C. (Madrid) *Mathematical Biology*, 1 Oct 05 – 30 Sep 07

Fuji Moto (Meiji University, Japan) *OCIAM*, 1 Apr 06 – 31 Mar 07

Gehrke, M. (Denmark) *Algebra*, 24 Aug – 31 Dec 06

Kai Meng Tan (Singapore) *Representation Theory*, 1 Jun – 30 Nov 06

Panovska, J. (Unilever) *Mathematical Biology*, 1 Oct 06 – 30 Jun 08

Patcher, L. (Berkeley) *Mathematical Biology*, 1 Sep 06 – 1 Jul 07

Pittenger, A. (Baltimore) *Quantum Computing*, 1 Aug 06 – 31 Jul 07

Scheerlink, N. (Leuven, Belgium) *Mathematical Biology*, 1 Oct 06 – 31 Mar 07

Shalloway, D. (Cornell University) *Mathematical Biology*, 1 Jan – 30 Jun 07

Sole, J. (Barcelona) *Mathematical Biology*, 1 Jan – 31 Dec 07

Thomas, D. (Victoria, Australia) *Applied Combinatorics*, 1 Mar – 31 Jul 07

Travieso, C. (Gran Canaria) *Nonlinear Dynamic Modelling*, 1 Oct 06 – 30 Jan 07

**Portsmouth University**

Afzalinejad, M. (Tehran Teaching Training University) *Operational Research*, 17 Sep 06 – 17 Mar 07

**Royal Holloway, University of London**

Byun, J.W. (Korea University) *The Construction of Searchable Encryption Schemes*, Jan – Aug 07

**Southampton University**

Turzi, S. (Politecnico di Milano, Italy) *Applied Mathematics*, 1 October 06 – 31 Jan 07

**St Andrews University**

Atkinson, M. (University of Otago, New Zealand) *Pattern Classes of Permutations*, 1 Jul – 31 Dec 06

Rich, A. (Manchester College, USA) *History of Mathematics*, 16 Aug 06 – 17 Jan 07

**Swansea, University of Wales**

Knopova, V. (V.M. Glushkov Institute of Cybernetics, Kiev, Ukraine) *Mathematical*

*Analysis and Stochastic Processes*, Feb – Jul 07

**University College London**

Fujiwara, A. (Osaka University, Japan) *Quantum information Theory, Noncommutative Statistics, Information Geometry*, Aug 06 – 31 Mar 07

**Warwick University**

Stanghellini, E. (University di Perugia, Italy) *Graphical Models*, 21 May – 26 Oct 07



**Lighthill Institute of Mathematical Sciences**

De Morgan House, 57–58 Russell Square, London WC1B 4HS  
Tel: +44 (0)20 7863 0881 Email: office@lims.ucl.ac.uk

**Tuesday 12th December 2006**  
**Evening Lectures**

**PSYCHOLOGY AND MATHEMATICS**

**Hardy Room, De Morgan House, 57 Russell Square, London WC1B 4HS**

**5:00 pm – 5:45 pm *There's no-one quite like Grandad***

**Steve Blinkhorn (Psychometric Research & Development Ltd)**

Newly rediscovered evidence casts fresh light on early developments of mathematics applied to psychology. The original work of Charles Spearman on general intelligence may have been distorted by the teaching practices of a prep school: the sources of his data, believed lost, have been found. JC Maxwell Garnett, in contact with Spearman, Cyril Burt and Godfrey Thomson, developed an approach to multiple factor analysis during the First World War that antedated Louis Thurstone by a decade and a half. What was said in 1923 when Cyril met Louis, and did Louis want to hide it? How personalities, feuds, short tempers and rivalries marked the contemporaneous hatching of multivariate methods and theories of intelligence, and what use the military made of the Grote Professor of Mind and Logic during the First World War.

**5:45 pm – 6:15 pm Break for Refreshments**

**6:15 pm – 7:00 pm *Numbers in the Brain***

**Professor Brian Butterworth (Institute of Cognitive Neuroscience, UCL)**

The Brain appears to have a mechanism for recognising and representing number and order. Here I discuss evidence from patients, from synaesthetes, from MRI, TMS and optical topography that is beginning to show how this mechanism works. I will also discuss how and why it fails to work in more than 5% of the population.

Frank Smith and the LIMS committee

Entrance is free and event is open to all. RSVP: office@lims.ucl.ac.uk

**CALENDAR OF EVENTS**

This calendar lists Society meetings and other events publicised in the *Newsletter*. Further information can be obtained from the appropriate LMS *Newsletter* whose number is given in brackets. A fuller list of meetings and events is given on the Society's website ([www.lms.ac.uk/meetings/calendar.html](http://www.lms.ac.uk/meetings/calendar.html)).

**DECEMBER 2006**

- 1-2 Khovanov Homology for Knots and Links Workshop, Liverpool (353)
- 7 Noncommutative Day, Imperial College London (354)
- 8 Edinburgh Mathematical Society Meeting, Heriot-Watt (350)
- 11-15 Representation Theory and Physics Conference, City University, London (352)
- 12 Psychology and Mathematics LIMS Evening Lectures, De Morgan House, London (354)
- 15-16 Theoretical Fluid Dynamics in the 21st Century Conference, Imperial College London (352)
- 18-19 Recent Advances in Probability, Statistics and Financial Stochastics Workshop, Middlesex University (354)
- 18-22 Trends in Noncommutative Geometry, INI, Cambridge (349)

**JANUARY 2007**

- 5-6 The Hall-Higman Theorems Conference, Oxford (352)
- 7-10 Number Theory, UK-Japan Winter School, Cambridge (354)
- 8-31 Mar Interface Problems and Applications in Fluid Dynamics, Singapore (351)
- 10-15 Analysis on Graphs & its Applications LMS/EPSRC Short Course, Gregynog Hall, University of Wales (353)
- 12 Yorkshire & Durham Geometry Day, Durham (353)
- 19 Edinburgh Mathematical Society Meeting, Edinburgh (350)

24 Winter Combinatorics Open University Meeting, Open University (354)

**FEBRUARY 2007**

- 9 LMS Meeting, Mary Cartwright Lecture, London (354)
- 16 Edinburgh Mathematical Society Meeting, Edinburgh (350)

**MARCH 2007**

- 4-7 21st Century Mathematics Conference, Lahore (353)
- 16 Edinburgh Mathematical Society Meeting, Dundee (350)
- 26-30 Theory of Highly Oscillatory Problems Workshop, INI, Cambridge (353)
- 26-31 Geometric Flows and Related Topics Symposium Workshop, Warwick, (350)

**APRIL 2007**

- 10-14 LMS Invited Lectures, The Geometric Langlands Correspondence, Oxford (354)
- 16-19 BMC, Swansea (354)
- 17-19 BAMC, Bristol (354)
- 20 LMS Midlands Regional Meeting, Loughborough
- 27 Edinburgh Mathematical Society Meeting, Stirling (350)

**MAY 2007**

- 14-13 Jul Braids Programme, Singapore (353)
- 18-20 Midwest Geometry Conference, Iowa, USA (350)
- 25 Edinburgh Mathematical Society Meeting, Aberdeen (350)
- 30 LMS South West & South Wales Regional Meeting, Cardiff

**JUNE 2007**

- 22 LMS Meeting, London

**JULY 2007**

- 2-6 Effective Computational Methods for Highly Oscillatory Problems Workshop, INI, Cambridge (353)

## GEORGE CAMPBELL DE MORGAN (1841–1867)



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A thoroughly committed mathematician, George Campbell De Morgan was the third child of Augustus and Sophia De Morgan. He attended University College School from 1856 to 1857 and then UCL, where he gained numerous distinctions, winning the first prize in his father's class, a valuable scholarship, and the University of London gold medal when he took his M.A. in 1863. From 1863-65 he was a mathematics master at the School, also examining in

mathematics for the University of London. Nicknamed 'the younger Bernoulli', in reference to the fact that his father too was an able mathematician, George's health was never strong. He presented only one paper to the LMS *On the development of a certain class of functions* read on 13 December 1866. His death of consumption in October 1867 devastated the senior De Morgan and robbed the world of a mathematician of very great promise.