

INTERNATIONAL CENTRE FOR MATHEMATICAL SCIENCES

<http://www.icms.org.uk>



ERCOM: ICMS Edinburgh

The inaugural event of Edinburgh's International Centre for Mathematical Sciences (ICMS) was a meeting on Geometry and Physics held at Newbattle Abbey near Edinburgh in March 1991. Alain Connes, Roger Penrose and Simon Donaldson were among the speakers and Jacques-Louis Lions (Collège de France) was chair of the ICMS Programme Committee.

ICMS had been founded by a partnership that involved Edinburgh and Heriot-Watt universities, Edinburgh City Council, and the *International Centre for Theoretical Physics* in Trieste, with support from some of Edinburgh's financial institutions. An important figure during those early days of ICMS was John Ball, currently president of the *International Mathematical Union*. The Nobel Prize winner Abdus Salam also took a keen interest in its development.

In 1994 ICMS moved to its current premises, 14 India Street, which is the house in Edinburgh's New Town where the celebrated physicist James Clerk Maxwell was born on 13 June 1831.

Purpose of ICMS

From the outset the purpose of ICMS was to

- Create an environment in which the mathematical sciences will develop in new directions
- Encourage and exploit those areas of

mathematics that are relevant to other sciences, industry and commerce

- Promote international cooperation with particular reference to mathematicians working in developing countries

As a joint venture of its two founding universities, ICMS has, under the leadership of Angus MacIntyre, its first Scientific Director, established a strong reputation for running high quality international workshops across the full range of mathematical sciences and for bringing the best mathematicians in the world to Edinburgh and the UK. This record is all the more remarkable because it has, until now, been achieved in the absence of systematic core funding from government agencies, using only funds raised through the initiative of organisers who brought their projects to Edinburgh.

Editorial services, workshops and meetings

To compensate for the lack of core funding for its activities, ICMS has been developing a modest commercial arm by offering editorial services to journals and management services to research agencies. Currently, editorial work for the *Proceedings of the Royal Society of Edinburgh* and *Proceedings of the Edinburgh Mathematical Society* are done at ICMS headquarters, and ICMS manages the *Environmental Mathematics and Statistics Workshops* on behalf of the



Natural and Environmental, and the Engineering and Physical Sciences, Research Councils.

Determined that ICMS should succeed with its mission despite limited means, over the past decade a small but highly committed and resourceful staff has produced a range of meetings of outstanding quality across the entire range of the Mathematical Sciences, from *New Mathematical Developments in Fluid Mechanics* (1995) organised by Constantin, P-L Lions and Majda to the recent celebration of the *Centenary of Sir William Hodge* who was born in Edinburgh in 1903. This meeting, which was organised by Atiyah, Bloch, Donaldson, Griffiths and Witten, with members of Hodge's immediate family attending the historical lectures and the banquet, was described as 'stellar' by one distinguished participant. Details of meetings held since 1995 are available at <http://www.icms.org.uk/previous/index.html>.

In addition to research workshop activity ICMS has played a full part in the mathematical life of Scotland and of the UK. On the one hand it had a pivotal role in the organisation of *ICIAM* which brought over 2000 delegates to



Delegates at Geometry and Physics, Newbattle Abbey, 1991



New Mathematical Developments in Fluid Mechanics, Edinburgh, 1995 - part of the UNESCO 50th anniversary celebrations.

Edinburgh in 1999 and, on a totally different scale, it runs workshops and support meetings for research students in Scottish universities. It also encourages workshops on industrial problems from the local region. Most recently, in 2004 ICMS joined with the Faculty of Actuaries to set up a major meeting for senior professional actuaries on the problems currently facing the pensions industry in the UK and worldwide.

The Future

With its strong record of past achievement on a limited budget, in November 2004 ICMS and its two founding universities entered a partnership with the *Scottish Higher Education Funding Council (SHEFC)* and the UK's *Engineering and Physical Sciences Research Council (EPSRC)* with the aim of having guaranteed funds for workshops from now until 2008/9. During that period the ICMS Programme Committee, under the chairmanship of Jerry Bona (University of Illinois at Chicago), will have at its disposal funds for about eight international workshops per year, each with about 40 participants, and at the same time will continue to solicit proposals for workshops of various sizes from organisers who can make other funding arrangements. The new arrangement will enable ICMS to improve its facilities and very soon past visitors to India Street will see changes, with new decoration, modernisation of

the lecture-room facilities and the introduction of new break-out rooms and computer equipment. Workshop organisers and participants will still benefit from the experience of the Centre Manager, Tracey Dart, who will now be able to designate one of the ICMS staff as a Conference Coordinator to each workshop. ICMS will continue to offer editorial and managerial services to the academic community.

With the new arrangements in place the ICMS Scientific Director, John

Toland (University of Bath), and the Programme Committee are now soliciting high quality adventurous proposals in all branches of the mathematical sciences and scientific areas with significant mathematical content and, to be fair to inter-disciplinary proposals, will find ways to counter the inherent conservatism of the peer review process. They will also continue to look for ways to support participants from developing countries, an important part of the ICMS mission since it was founded, but still difficult because of a lack of available funding.

Within the United Kingdom the role of ICMS in promoting and supporting short workshop activity in Edinburgh complements that of the *Isaac Newton Institute* in Cambridge where support for researchers in residence in Cambridge is the key to the success of its long-term research programmes. In fact the two institutes are developing a good understanding and a close working relationship.

Institutional Structure

ICMS is a joint venture of Heriot-Watt and Edinburgh universities, is an institutional member of the *European Mathematical Society* and is represented on *European Research Centres on Mathematics (ERCOM)*. The scientific programme is controlled by the Programme Committee with membership drawn from across the UK and abroad. Resources from EPSRC, SHEFC, Heriot-Watt and Edinburgh Universities, and elsewhere are allocated to individual workshops by a Management Committee of the two universities, following advice



Distinguished participants at the Hodge Centenary Conference, Edinburgh, 2003, including past and current scientific directors Angus MacIntyre (bottom row, second left) and John Toland (middle row, third left).

Call for Proposals

Proposals are invited for workshops to be held at ICMS in Edinburgh in 2005/6.

The International Centre for Mathematical Sciences (*ICMS*) is based in central Edinburgh, in the birthplace of James Clerk Maxwell. Following new funding arrangements with EPSRC for the period 2005 to 2008 *ICMS* is able to offer support to run workshops and symposia on all aspects of the mathematical sciences in new or traditional subjects and interdisciplinary areas with significant mathematical content.

The core of *ICMS* activity will be the rapid-reaction research workshop programme (R3WP). *ICMS* therefore particularly welcomes proposals for workshops in rapidly-developing and newly-emerging areas where there is a need to evaluate new developments quickly. *ICMS* will respond quickly to such proposals. Organisers can expect preliminary comments from reviewers in 8 weeks. Decisions will be made by the Programme Committee four times a year (December, March, May and September). Small meetings can be organised in 6-8 months from acceptance.

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). Proposals may be submitted at any time.

Full instructions on how to submit a proposal, together with details of the refereeing process and criteria for selection can be found on the webpages:

<http://www.icms.org.uk/call/index.html>

Anyone unable to read these pages or download documents can order print versions from *ICMS*.

If your application is successful, you 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 (such as issuing invitations, processing registrations, organising accommodation, preparing material, financial administration). 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 all enquiries about *ICMS* or the procedures for submitting a proposal, please contact Tracey Dart, Centre Manager, *ICMS*, E-mail Tracey.Dart@icms.org.uk (14 India Street, Edinburgh EH3 6EZ, Tel +44 (0)131 220 1777; Fax +44 (0)131 220 1053).

from the Programme Committee. *ICMS* is advised by the *ICMS Board*, whose membership is drawn from organisations with an interest in *ICMS*, such as the Edinburgh and London Mathematical Societies, the Royal Society of Edinburgh, ICTP, and the City of Edinburgh.

International Centre for Mathematical Sciences

14 India Street, Edinburgh EH3 6EZ

Scientific Director & Chair of the Management Committee:

John Toland (University of Bath)

Programme Committee Chair:

Jerry Bona (University of Illinois at Chicago)

Management Committee Deputy Chairs:

Chris Eilbeck (Heriot-Watt University)

Tony Carbery (Edinburgh University)

Centre Manager:

Tracey Dart (*ICMS*)

The classical Georgian house in central Edinburgh that is the headquarters of *ICMS* has proved an attractive venue for workshops and with the new funding arrangements will, it is hoped, continue to be so far in the future.

Ramanujan Prize for Young Mathematicians from Developing Countries

The Abdus Salam International Centre for Theoretical Physics (ICTP) is pleased to announce the creation of the Ramanujan Prize for young mathematicians from developing countries. The Prize is funded by the Niels Henrik Abel Memorial Fund.

The Prize will be awarded annually to a researcher from a developing country less than 45 years of age at the time of the award, who has conducted outstanding research in a developing country. Researchers working in any branch of the mathematical sciences are eligible. The Prize carries a \$10,000 cash award and travel and subsistence allowance to visit ICTP for a meeting where the Prize winner will be required to deliver a lecture. The Prize will usually be awarded to one person, but may be shared equally among recipients who have contributed to the same body of work.

The Prize will be awarded by ICTP through a selection committee of five eminent mathematicians appointed in conjunction with the International Mathematical Union (IMU). The first winner will be announced in 2005. The deadline for receipt of nominations is July 31, 2005.

Please send nominations to director@ictp.it describing the work of the nominee in adequate detail. Two supporting letters should also be arranged.