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## **2009 David Crighton Award**

Cambridge mathematician Professor Keith Moffatt, FRS, has been honoured for a career which has combined world class research in applied mathematics with determined efforts to draw mathematicians together from around the world.

The Councils of the Institute of Mathematics and its Applications and of the London Mathematical Society have awarded the 2009 David Crighton Medal for services to mathematics and to the mathematical community to Professor, Emeritus Professor of Mathematical Physics at the University of Cambridge, in recognition of his contributions to fluid dynamics and mathematical modelling and for his leadership in many positions in UK and international mathematical organisations.

Professor David Abrahams, president of the IMA, said, "The contribution Keith made to the UK and international mathematics communities is incomparable. He has worked tirelessly to set up mathematical research in developing nations, and has been a long-term champion of the African Institute of Mathematical Sciences in Cape Town. And as director of the UK's national institute for the mathematical sciences - the Isaac Newton Institute in Cambridge - he attracted exceptional programmes from across the full mathematical spectrum. Participants speak with great affection of his constant interest in their programmes and his attention to detail."

Sir John Ball, president of the LMS, paid tribute to Professor Moffatt's research career, which spanned 50 years. He said, "Keith is one of the world's foremost applied mathematicians. He is probably best known for his work in *magnetohydrodynamics*, addressing the dynamics of electrically

conducting fluids such as plasmas, liquid metals and salt water. His work contributed enormously to our understanding of the interaction between fluid turbulence and magnetic fields.”

The presentation of the David Crighton Medal will take place at a joint meeting of the IMA and the LMS on the evening of 17 March 2010 at the Royal Society and will be followed by a lecture from Professor Moffatt.

**ENDS**

## **IMA-LMS David Crighton Award 2009**

### **Professor Keith Moffatt, FRS**

The Councils of the Institute of Mathematics and its Applications and of the London Mathematical Society have awarded the 2009 David Crighton Medal for services to mathematics and to the mathematical community to Professor Keith Moffatt, F.R.S., Emeritus Professor of Mathematical Physics at the University of Cambridge, in recognition of his contributions to fluid dynamics and mathematical modelling and for his leadership in many positions in UK and international mathematical organisations.

Keith Moffatt is one of the world's pre-eminent applied mathematicians, who has, over a research career spanning 50 years, made land-mark contributions to an extraordinarily wide range of problems in fluid mechanics.

Seminal works include his creation of the new sub-discipline of topological fluid mechanics, in which he used fundamental notions from topology to shed light on the dynamics of turbulent flow; his discovery of unsteady circulatory motion in low-Reynolds number corner flow (the so-called Moffatt eddies); and in magnetohydrodynamics, in which he elucidated the interaction between fluid turbulence and magnetic fields.

Keith's work is characterised by his ability to translate complex physical processes into tractable mathematical models, which he solves with great elegance to yield an extraordinary level of new physical insight and understanding. His ability to communicate this insight to an audience, and to inspire them with his fascination for the subject, is one of the hallmarks of his presentations.

Keith has made an immense contribution to the mathematics community. His highly successful tenure as Director of the Isaac Newton Institute (INI) in Cambridge has had a major impact on both UK and international mathematics. Under his leadership the INI was able to cement its position as a key asset for the whole UK community. The breadth of exceptional programmes that Keith was able to attract from across the full mathematical spectrum was a key element during his period as Director. INI participants speak with great affection of his constant interest in their programmes and his attention to detail.

Keith has also given many years of outstanding service to the International Union of Theoretical and Applied Mechanics (IUTAM), including a period as President, 2000-2004. Beyond these contributions he is particularly active in helping to build capacity for mathematical research in developing nations, and has been a long-term champion of the African Institute of Mathematical Sciences in Cape Town.

## Notes for Editors

1. The **Institute of Mathematics and its Applications (IMA)** is the learned and professional society for mathematics. It promotes mathematics research, education and careers, and the use of mathematics in business, industry and commerce. Amongst its activities the IMA produces academic journals, organises conferences, and engages with government. Founded in 1964, the Institute has 5,000 members. Forty percent of members are employed in education (schools through to universities), and the other 60% work in commercial, industrial and governmental organisations. In 1990 the Institute was incorporated by Royal Charter and was subsequently granted the right to award Chartered Mathematician designation.

2. The **London Mathematical Society (LMS)** is the UK's learned society for mathematics. Founded in 1865 for the promotion and extension of mathematical knowledge, the Society is concerned with all branches of mathematics and its applications. It is an independent and self-financing charity, with a membership of over 2600 drawn from all parts of the UK and overseas. Its principal activities are the organisation of meetings and conferences, the publication of periodicals and books, the provision of financial support for mathematical activities, and the contribution to public debates on issues related to mathematics research and education. It works collaboratively with other mathematical bodies worldwide. It is the UK adhering body to the International Mathematical Union.

3. The IMA and LMS are members of the **Council for the Mathematical Sciences**, which also incorporates the Royal Statistical Society, the Edinburgh Mathematical Society and the Operational Research Society.

4. The **David Crighton Award** was instituted by the IMA and LMS in memory of Professor David George Crighton FRS, (15 November 1942 – 12 April 2000) a former President of the IMA and President-Designate of the LMS at the time of his death. David was Master of Jesus College, Cambridge, and Professor of Applied Mathematics at Cambridge University; he was a leader in the fields of Fluid Mechanics and Applied Mathematics, influencing their progress nationally and internationally through his contributions both to research and administration. The Medal is awarded triennially to an eminent mathematician for services both to mathematics and to the mathematical community. Previous winners are Sir John Ball, FRS and Sir Christopher Zeeman, FRS.

Contact: **Caroline Davis**

LMS-IMA Mathematics Promotion Unit

De Morgan House, 57–58 Russell Square, London WC1B 4HS.

Tel: +44 (0)20 7927 0804

Email: [caroline.davis@lms.ac.uk](mailto:caroline.davis@lms.ac.uk)

### **Institute of Mathematics and its Applications**

Catherine Richards House, 16 Nelson Street, Southend-on-Sea, Essex. SS1 1EF  
[www.ima.org.uk](http://www.ima.org.uk)

### **London Mathematical Society**

De Morgan House, 57-58 Russell Square, London. WC1B 4HS  
[www.lms.ac.uk](http://www.lms.ac.uk)