Media release 23 March 2011

Embargoed until 11:30am

Abel Prize 2011

Rewarding simplicity and beauty in mathematics

Today, the President of the Norwegian Academy of Science and Letters, Øyvind Østerud, announced that Professor John Willard Milnor, Institute for Mathematical Sciences, Stony Brook University, New York has been awarded the 2011 Abel Prize 'for pioneering discoveries in topology, geometry and algebra'.

The announcement was warmly received by the UK mathematical community. Dr Graeme Segal FRS, President-Designate of the London Mathematical Society, said, 'John Milnor has been one of the mathematical giants of his time. He burst like a meteor on to the mathematical scene in the 1950s, and in the next 10 years transformed geometry by a series of discoveries that were utterly startling but at the same time completely simple, crystal clear, and supremely beautiful. His ideas and his writings formed and inspired more than a generation of mathematicians, and opened up avenues of research which have continued to bear fruit up to the present day. His ability to combine lucidity with depth in mathematical exposition has seldom been equalled'.

Dr Alan Stevens, VP Communications for the Institute of Mathematics and its Applications added, 'The IMA is very pleased to be able to congratulate John Milnor, Distinguished Professor and Co-Director of the Institute for Mathematical Sciences at Stony Brook University, on his award of the prestigious Abel Prize for 2011. His extensive and incisive contributions in

the fields of topology, geometry and algebra have been clearly recognised by the Norwegian Academy of Science and Letters as of major importance. He deservedly joins the small list of distinguished mathematicians who have been awarded the prize since its inception in 2003'.

John Milnor's profound ideas and fundamental discoveries have largely shaped the mathematical landscape of the second half of 20th century. All of Milnor's work display features of great research: profound insights, vivid imagination, striking surprises and supreme beauty.

In the course of 60 years, John Milnor has made a deep mark on modern mathematics. Numerous mathematical concepts, results and conjectures are named after him. In the literature we find Milnor exotic spheres, Milnor fibration, Milnor number and many more. Yet the significance of Milnor's work goes far beyond his own spectacular results. He has also written tremendously influential books, which are widely considered to be models of fine mathematical writing.

The Abel Prize is the most important international prize for mathematics. Announcing this year's prize, the Abel Committee noted, 'Milnor is a wonderfully gifted expositor of sophisticated mathematics. He has often tackled difficult, cutting-edge subjects, where no account in book form existed. Adding novel insights, he produced a stream of timely yet lasting works of masterly lucidity. Like an inspired musical composer who is also a charismatic performer, John Milnor is both a discoverer and an expositor'.

Amongst numerous honours, Milnor received the Fields Medal in 1962 for his work in differential topology when he was only 31. Recently he was awarded the 2011 Leroy P. Steele Prize for Lifetime Achievement by the American Mathematical Society (AMS). Milnor has previously won two other Steele Prizes from the AMS: for Mathematical Exposition (2004) and for Seminal

Contribution to Research (1982). In 1989 Milnor received the Wolf Prize in Mathematics.

Milnor also received the US National Medal of Science in 1967. He was elected as a member of the National Academy of Sciences in 1963. Since 1994, he has been a foreign member of the Russian Academy of Sciences, and in 2004 he became a member of the European Academy of Sciences, Arts and Letters.

Professor Tim Gowers FRS, Rouse Ball Professor of Mathematics, University of Cambridge said, 'The award of this year's Abel Prize to John Milnor will be widely welcomed. Not only has he proved a string of remarkable and strikingly beautiful theorems in several areas of mathematics, he is also an extraordinarily gifted expositor, the author of a number of books that have become classics. For these reasons, he has had a profound influence on mathematics over the past six decades and is one of the giants of the subject'.

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 Niels Henrik Abel Memorial Fund was established in 2002 to award the **Abel Prize** for outstanding scientific work in the field of mathematics. The Abel Prize was awarded for the first time in 2003. The prize is awarded by the Norwegian Academy of Science and Letters. The choice of Abel Laureate is based on the recommendation of the Abel Committee, which consists of five internationally recognized mathematicians.

4. For more information about the laureate, his achievements and the Abel Prize, visit the Abel Prize website www.abelprisen.no/en/. A photograph of Professor Milnor is available from the Norwegian Academy of Science and Letters (see below).

5. Contacts:

Anne-Marie Astad, Senior Information Adviser, the Norwegian Academy of Science and Letters
Phone: + 47 22 12 10 92
Fax: + 47 22 12 10 99
Mobile: + 47 41 56 74 06
E-mail: anne.marie.astad@dnva.no

Dr John Johnston, Mathematics Promotion Unit
Phone: + 20 7927 0804
Mobile: + 7851 779215
E-mail: john.johnston@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

London Mathematical Society De Morgan House, 57-58 Russell Square, London. WC1B 4HS
www.lms.ac.uk