



# THE LEARNED SOCIETY OF WALES CYMDEITHAS DDYSGEDIG CYMRU

CELEBRATING SCHOLARSHIP AND SERVING THE NATION  
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## Frontiers

### Back to the Big Bang, the Large Hadron Collider

Lyn Evans CBE FRS FLSW  
CERN

After 15 years in construction, the LHC has started its physics program. It is the most complex scientific instrument ever built, bringing together science and engineering on a grand scale. The 6000 superconducting magnets weighing nearly 50000 tons in total are cooled with 100 tons of superfluid helium. The machine has been built to address some of the most fundamental scientific questions including the origin of mass, dark matter and dark energy and the subtle asymmetry between matter and antimatter responsible for our very existence. Some of these questions will be discussed as well as the engineering principles of this unique instrument.

Tuesday 17 April 2012

Time: 18.00

Large Chemistry Lecture Theatre,  
Main Building, Cardiff University

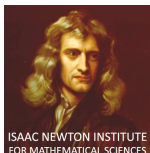
The distinguished lecture is aimed at a broad spectrum of scientists interested in the frontiers of mathematical research with applications and roots in theoretical physics and the other sciences. The Founding President of the Society, Professor Sir John Cadogan CBE FRSE PLSW FRS will take the chair. The event is open to anyone, with a tea in the Council Chamber from 17.00. For further information and to register for the event, contact Professor David Evans, [EvansDE@cf.ac.uk](mailto:EvansDE@cf.ac.uk), Cardiff School of Mathematics. The closing date for registration is Friday, 13 April 2012.

Lyn Evans was educated at Aberdare Grammar School and the University of Wales Swansea, before moving to CERN as a postdoc. He was the Project Leader of the LHC from its inception in 1994 until start-up in 2008. In 2008 received the American Physical Society's Robert R Wilson Prize for Achievement in the Physics of Particle Accelerators.

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Frontiers is a lecture series in which distinguished academics are invited to speak about the frontiers of research and to place their own contributions in context. This lecture is funded by the Isaac Newton Institute Cambridge, the Wales Institute of Mathematical and Computational Sciences, and Oxford University Press.

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