



HP Labs Science Lecture Series

Faster Than The Speed of Light?

Jim Al-Khalili

February 15, Cabot Auditorium, 5pm



Cabot Auditorium
HP Labs
Building 3
Long Down Avenue
Bristol
BS34 8QZ

The HP Labs Science Lectures were instituted in 1996 as a forum for extending the public understanding of science. They provide an opportunity for distinguished lecturers to discuss a broad spectrum of topics from current research in science or engineering to the interaction between science, technology, art and society.

The lectures are hosted by HP Labs, Bristol. Members of the public are welcome to attend, but are asked to register their attendance in advance.

Registration

To register, please email lucy.feilen@hp.com with the number of places that you require.

The lecture will also be followed by a drinks reception, and the opportunity to network.

Lecture Abstract

The recent experiment involving neutrinos supposedly breaking the speed of light barrier between CERN in Switzerland and Grand Sasso in Northern Italy has captured the world's imagination. The reason is that this result violates one of the central tenets of Einstein's special theory of relativity: that the speed of light (about one billion km/hr) is the maximum speed possible in our universe. If exceeded then it could lead to all sorts of paradoxes arising from the way space and time are affected at such speeds, even allowing for the possibility of travelling back through time. The experiment was greeted with scepticism with physicists so outraged that one even threatened to eat his boxers on live TV if it was proved correct. So what is all the fuss about? Why should nothing go faster than light? And what are the implications if the experiment turns out to be correct? Would over a century of modern physics need to be overturned?

Biography

Jim Al-Khalili is an Iraqi born theoretical physicist, author and broadcaster. He is a professor at the University of Surrey where he teaches and carries out his research in quantum physics. Jim currently presents *The Life Scientific* on Radio 4 on Tuesday morning, where he interviews

prominent scientists about their life and work. He has presented a number of science documentaries on television, particularly on BBC4 where he says he is happiest as he can really get his teeth into a subject. His work includes *Atom* (2007), *The Secret Life of Chaos* (2009), *Chemistry A Volatile History* (2010), which was nominated for a Bafta, *Everything and Nothing* (2011) and *Shock and Awe: The Story of Electricity* (2011). Jim has written a number of popular science and history of science books that have been translated so far into over twenty languages. He is a trustee of the British Science Association and advises the Royal Society, the British Council, the Institute of Physics and other bodies on matters of science policy, education, funding and public engagement. In 2008, he became the youngest ever recipient of the Royal Society's Michael Faraday prize for science communication and in 2011 won the Institute of Physics Kelvin Medal. In 2008, he received an OBE for his science communication work. He lives in Southsea with his wife, Julie, and has two teenage children. And for reasons lost in the mists of time, he is a die-hard follower of Leeds United.

For further information about Jim's work, please visit www.jimal-khalili.com