

## Department of Physics

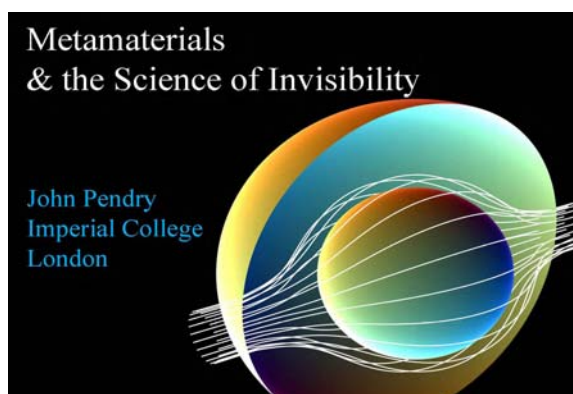
**Sir Nevill Mott Lecture presented by  
Professor Sir John Pendry, FRS**

### **Metamaterials and the Science of Invisibility**

Wednesday 19th March 2014, 5.15pm – 6.15pm Lecture Room W001

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Electromagnetism encompasses much of modern technology. Its influence rests on our ability to deploy materials that can control the component electric and magnetic fields. A new class of materials has created some extraordinary possibilities such as a negative refractive index, and lenses whose resolution is limited only by the precision with which we can manufacture them. Cloaks have been designed and built that hide objects within them, but remain completely invisible to external observers. The new materials, named metamaterials, have properties determined as much by their internal physical structure as by their chemical composition and the radical new properties to which they give access promise to transform our ability to control much of the electromagnetic spectrum.



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Sir John Pendry, born in Ashton-Under-Lyne near Manchester, is a condensed matter theorist. He began his research career in Cambridge and has worked at Imperial College London since 1981. In 1992 he turned his attention to photonic materials, which led to the first working "invisibility cloak". In 2013 he won the Isaac Newton Medal of the Institute of Physics for his seminal contributions to surface science, disordered systems and photonics.

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**A free public lecture. All welcome, although an understanding of physics principles up to 'A' level physics is recommended. No booking or tickets required.**

Lecture Room W001 can be found in the Sir David Davies building on the bottom floor; use the outdoor steps from the main road that lead to a square archway, and turn left at the front of the building where you'll see signs for Lecture room W001. Sir David Davies is on the West Park area of the Loughborough University campus.

You can view it on the map at <http://maps.lboro.ac.uk/place/sir-david-davies/>

**National Science and Engineering Week 2014 Loughborough University**

[www.lboro.ac.uk/nsew](http://www.lboro.ac.uk/nsew)