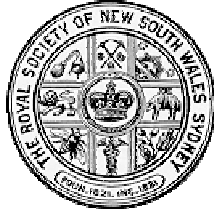


# The 2010 Einstein Lecture

## Quantum Physics: Einstein's Unruly Child

Supported by the Royal Society of New South Wales



Presented by the Australian Institute of Physics (NSW) and the Powerhouse Museum as part of the Ultimo Science Festival 2010

The birth of Quantum Physics results from one of Einstein's five revolutionary 1905 papers. His insights into the photo-electric effect began a revolution in Physics, but Einstein never fully came to terms with its consequences, as geniuses such as Bohr, Heisenberg and Schrodinger developed a completely new approach to Physics.

The consequences of Quantum Physics seem weird, but many of them flow from Einstein's first proposition that light acts as particles as well as waves, in fact we know now that matter also demonstrates this "wave-particle duality". With this key, then we can begin to make sense of some Quantum behaviour.

In the tradition of the Einstein series this talk will demonstrate some of the strange quantum effects with real experiments and introduce the science that has, despite its apparent strangeness, made some of the most accurate predictions of any theory.

### Presenter: Dr Phil Dooley

Dr Phil Dooley is a Science Communicator for the School of Physics at the University of Sydney. After a PhD in Laser Physics at ANU he fled nasty equations and long words, instead retiring to Rarotonga in the South Pacific as an Australian Volunteer Abroad. Coming back to Australia he had a stint in IT and training, and then worked as freelance science communicator, did impro theatre and tried to "get the Band back together".

In 2005 he got another day-job, and joined the School of Physics, where he gets to learn the fun stuff without having to do the hard maths. His job involves school workshops & shows and playing on Facebook.



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Date: Monday 23 August  
Venue: Powerhouse Museum

Time: 6.00 pm for 6.30 pm start  
Cost: Free (incl. museum entry)

Online bookings essential at  
<http://www.powerhousemuseum.com/bookings/usf/einstein.php>

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