

Physics research talks 2016-17

Ever wondered what goes on behind the lab doors? Come and find out!

Peter Mason

Quantum Computers: *What are they and do they exist?*

Wed 3 May, 13.00, U0.05



Quantum computers offer the potential to solve particular problems much faster than classical computers. But what problems? And how much faster? One example is quantum cryptography: security on the internet is based on the inability of a classical computer to efficiently factor large

numbers. Conversely, a quantum computer would achieve this factorisation efficiently. Another example is a database search, where the speed-up would be quadratic.

I will explain the basics behind a quantum computer (such as entanglement and superposition), and give a state-of-the-art perspective on possible future developments, including...do/will they actually exist?



all welcome!

Forthcoming talks

Will Huish and Iliya Dimitrov, *3D printing for quantum technology* Wed 10 May 1500 U005

Binoy Sobnack, *Phase slips and critical currents* Wed 17 May 1300 SMB017

Please let John Samson know if you would like to offer a talk in next year's series.