

Cambridge Physics Centre

Relativity - understanding the connection between space and time

by Dr Julia Riley

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Newtonian mechanics describes everyday life, but at speeds close to the speed of light we need to use Einstein's theory of special relativity which applies to so-called inertial frames and is based on two fundamental postulates. Using simple mathematics I will show how these postulates change the way we interpret time and length and the way they are linked through the concept of space-time. I will also look briefly at the theory of general relativity - a generalisation of the theory of relativity to non-inertial reference frames - which is based on the principle that a gravitational field is completely equivalent to a uniformly accelerated reference frame.

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6pm on Thursday 13th November 2014

**Pippard Lecture Theatre, Cavendish Laboratory,
J J Thomson Avenue, Cambridge**

Directions at

<http://www-outreach.phy.cam.ac.uk/cpc/>

No need to book, just turn up