



# CERN Colloquium

SPEAKER: Bruce Allen (Max Planck Society/Albert Einstein Institute Hannover)

TITLE: **The Einstein@Home search for gravitational waves and neutron stars**

DATE: Thu 23/02/2012 16:30

PLACE: Council Chamber

## ABSTRACT

Einstein@Home is a volunteer distributed computing project with more than 300,000 participants. Like other volunteer computing projects, Einstein@Home harvests idle computer cycles from the the laptop and desktop computers of the general public. This provides enormous computing power, on the scale of some of the world's fastest supercomputers, but at very low cost. I describe the current status of the Einstein@Home search for new neutron stars, using data from the Laser Interferometer Gravitational-wave Observatory (LIGO), from the Arecibo and Parkes radio telescopes, and from the Fermi gamma-ray satellite.

The sensitivity of these searches is limited by computing power, so the Einstein@Home approach allows the detection of weaker signals than more conventional approaches. In the past 18 months, Einstein@Home has discovered more than 20 new radio and gamma-ray pulsars, including a number of particularly interesting and exotic systems.

Organised by: Ignatios Antoniadis/PH-TH.....\*\*Tea  
and coffee will be served at 16h00\*\*