# John Adams Institute for Accelerator Science Lecture Series

Thursday 8th May 2014 at 4:15pm
Fisher Room, Denys Wilkinson Building

## *The Swiss Free Electron Laser Linac*

The lecture will be delivered by

**Terence Garvey,**
**Paul Scherrer Institut**

*Abstract:*
The Paul Scherrer Institut is currently constructing an x-ray free electron laser, SwissFEL, based on the principle of self–amplified spontaneous emission. The laser will provide researchers with a high brilliance source of hard (1 – 7 Angstroms) and soft (7 – 70 Angstroms) x-rays with femto-second scale pulse lengths. The driver for SwissFEL will be a 5.8 GeV normal conducting electron linac essentially based on C-band (5.7 GHz) radio-frequency (RF) technology. We will describe developments currently in progress for the linac design and construction with emphasis on the RF systems. A 250 MeV S-band (3 GHz) electron injector has been built as a proto-type of the SwissFEL injector in order to validate technology choices for the project. Some results of beam tests on the injector will also be presented.

Downstream view of the SwissFEL Injector Test Facility

For further details contact Glenn Christian at g.christian1@physics.ox.ac.uk