

Title: Dr

Lecturer: Niko Neufeld

Date and Times:

- Monday 18th July from 11:15 am - 12:00 am
- Tuesday 29th July from 11:15 am - 12:00 am
- Wednesday 20th July from 11:15 am - 12:00 am

Summary of the proposed talk: Electronics, DAQ (Experimental Physics)

Data acquisition is the process of getting the data from the detector to permanent storage. In these lectures we will cover the main elements of data acquisition systems, read-out electronics, data-links and switching networks and computers. Then we will go through the design of a DAQ for a modern large HEP experiment. Finally we will take a look at the DAQ systems of the 4 large LHC experiments.

Prerequisite knowledge and references:

No prerequisite knowledge required.

Familiarity with electronics and/or computing is useful but not necessary.

Biography

Brief CV:

- ✓ Since 2004 CERN staff. Deputy project leader of the LHCb Online system, responsible for data acquisition and computing infrastructure
- ✓ From 2003 to 2004 postdoc at Ecole Polytechnique Federale de Lausanne
- ✓ From 2000 to 2002 CERN fellow (joined the Online group of the LHCb experiment)
- ✓ Till 2000 employed by the Austrian Academy of Sciences (DELPHI experiment)
- ✓ PhD in particle physics from Vienna University of Technology (1999), From 1990 studies physics and computer science in Vienna

Publications:

N. Neufeld, D. Liko "Managing the Extreme Dataflow of LHC", in Encyclopedia of Applied High Energy and Particle Physics, Wiley, 2009