Introduction to Trigger / Data Acquisition / Data Analysis Niko Neufeld

Basic principles of triggering and implications of the trigger on the experiment design will be discussed: dead-time, efficiency, synchronisation. Data acquisition systems will be illustrated with small and medium-scale examples. Bus- and network based DAQ will be compared.

Very briefly the challenges for very large systems as found in the LHC experiments will be discussed. The lecture will conclude with some very basic aspects of data-analysis focussing on reconstructing physics quantities from raw data.