# INFN School of Statistics 2013

**Monday, 3 June 2013 - Friday, 7 June 2013**

**Lloyd's Baia Hotel, Vietri sul Mare (SA)**

# Scientific Programme

Scientific Programme
Probability theory
Introduction to probability theory
Bayesian and frequentist approaches to probability
Random variables, distributions and main properties
Statistical inference
Parameter estimates, properties of estimators
Maximum likelihood method
Pearson and Neyman chi-squares
Confidence intervals and upper limits
Hypothesis testing
Goodness of fit
Frequentist and Bayesian upper limits
Multivairiate discriminators
Overview of multivariate discrimination methods
Artificial neural networks
Boosted decision trees
Statistical software tools
Overview of the main statistical tools
RooFit, RooStats
Usage examples and code demonstrations
Lecturers
Glen Cowan (Royal Holloway, London)
Luc Demortier (Rockfeller University, New York)
Lorenzo Moneta (CERN, Geneva)
Jochen Ott (KIT, Karlsruhe)
Harrison Prosper (Florida State University, Tallahassee)
**Lectures detailed programme**