

IN2P3 School of Statistics 2012



lundi 28 mai 2012 - vendredi 1 juin 2012

Autrans Site

Programme Scientifique

Lectures will be given partly in english (Bayesian analysis : a tutorial, Neural Networks, Fitting Higgs limits) and partly in french (Fundamental concepts, Numerical tool for bayesian approach, Chi2 and MLM, Boosted Decision Trees, Theory of multivariate discriminant, Statistics in Tracking, sPLOT)

I. Fundamental Concepts

Probability and Statistics

2 sessions of 1h30

Lecturer : B. Clement (LPSC)

Bayesian analyses: a tutorial

3 sessions of 1h30

Lecturer : D. Sivia (Oxford)

Fits, chi2 method and Method of Maximum Likelihood

1 session of 1h30

Lecturer : J. Baudot (IPHC)

Numerical Methods for a bayesian analysis

1 session of 1h30

Lecturer : R. Bardenet (LRI)

II. Multivariate Discriminant

Multivariate discriminant : theoretical introduction

1 session of 1h30

Lecturer/Intervenant : B. Kegl (LAL)

Neural Networks

1 session of 1h30

Lecturer / Intervenant : J. Therhaag (Bonn)

Boosted Decision Tree and application

2 sessions of 1h30

Lecturer/Intervenant : Yann Coadou (CPPM)

III. Tools and Framework

Unfolding: general and bayesian approach

1 session of 1h30

Lecturer/Intervenant : Francesco Spano (RAL)

sPlot: a statistical tool to unfold data distributions

1 session of 1h30

Lecturer/Intervenant : F. Le Diberder (LAL)

Setting limits for the Higgs boson :

2 sessions of 1h30 hr

Lecturer / Intervenant : L. Lista (INFN)

Algorithms for Trajectometry

1 session of 2h00

Lecturer/Intervenant : P. Billoir (LPNHE)