

# Interdisciplinary Workshop on Statistical and Analysis Methods in Nuclear, Particle and Astrophysics

2014 Nov 3-5 at ECT\* in Villazzano, Italy

Last update: 31 Oct 2014, A. Müller

## MONDAY, 2014 Nov 3

start end event

11:00 14:00 REGISTRATION

12:15 14:00 Lunch

0 14:00 14:05 **SOC**  
WELCOME

### Introductory Lectures (Chair: A. Müller)

1 14:05 14:40 **F. Guglielmetti**  
Motivation

2 14:40 15:15 **F. Guglielmetti**  
Probability theory

15:15 15:45 Coffee break

3 15:45 16:20 **F. Guglielmetti**  
Bayesian methods

4 16:20 16:55 **F. Guglielmetti**  
Frequentist methods

5 16:55 17:30  
DISCUSSION

19:30 Dinner

## TUESDAY, 2014 Nov 4

start end event

### Astronomy & cosmology (Chair: T. Ensslin)

6 09:00 09:35 **F. Guglielmetti**  
Bayesian methods, not only for astronomical images

7 09:35 10:10 **J. Jasche**  
4D Bayesian inference with LSS surveys

8 10:10 10:45 **B. Wandelt**  
Statistical Methods in Cosmology

10:45 11:15 Coffee break

9 11:15 12:15 **n.n.**  
STUDENTS, WRAP-UP

12:15 14:00 Lunch

### Particle physics (Chair: A. Caldwell)

10 14:00 14:35 **K. Cranmer**  
The frontier of analysis methods for particle physics

11 14:35 15:10 **M. Betancourt**  
Stan: A Platform for Efficient Bayesian Inference

12 15:10 15:45 **B. Kegl**  
Introduction to multivariate analysis methods

15:45 16:15 Coffee break

13 16:15 16:50 **S. Biller**  
The Confidence Game

14 16:50 17:50 **n.n.**  
STUDENTS

15 17:50 18:00  
DISCUSSION

19:30 Dinner

## WEDNESDAY, 2014 Nov 5

start end event

### Astroparticle physics (Chair: B. Grube)

16 09:00 09:35 **F. Beaujean**  
Variational Bayes: a versatile workhorse

17 09:35 10:10 **F. Pröbst**  
CRESST experiment and analysis

18 10:10 10:45 **C. Arina**  
Bayesian analysis of direct dark matter detection experi.

10:45 11:15 Coffee break

19 11:15 12:15 **n.n.**  
STUDENTS, WRAP-UP

12:15 14:00 Lunch



Weblinks:

[www.universe-cluster.de/trento2014](http://www.universe-cluster.de/trento2014)

[www.ectstar.eu/node/781](http://www.ectstar.eu/node/781)