



Martedì 13 Febbraio 2018

Aula Magna del Dipartimento di  
Fisica ed Astronomia  
ore 15:00

## **Claims of discoveries based on statistical tests ('p-values')**

***Giulio D'Agostini***

*(Dipartimento di Fisica, Università di Roma La Sapienza)*

**Abstract:** Frontier Physics involves investigations to the limit of detector sensitivity and the phenomena one searches for can usually be 'mimicked' by other, less interesting ones ('background'). Providing firm results is often not possible, and the claims of discovery are usually accompanied by "statistical significance", traditionally turned by high energy physicists into "number of sigma's". Meaning and misinterpretation related to the "n-sigma's" will be illustrated, reporting and discussing examples taken from Particle Physics.