ID de la contribución : **607**                                                    Tipo : **Poster**

# The ATLAS Higgs Boson Machine Learning Challenge

High Energy Physics began utilising Machine Learning technique such as Multivariate Analysis, Neural Nets and Boosted Decision Trees since the 90's, but the connections between the HEP scientific community and the computer science community are poor and can be improved.

In HEP there are exciting and difficult problems such as the extraction of the Higgs boson signal, while computer scientists are eager to develop advanced algorithms. The goal of the HiggsML project is to bring the two fields together by means of a "challenge", where participants from all over the world and any scientific background can compete to obtain the best signal over background ratio on a set of simulated data.

The challenge was organized by the ATLAS collaboration, the LAL and INRIA-Saclay in partnership with CERN and Google. It will run between May 2014 and September 2014 to encourage participation of students and professors.

The organization, the startup and prospects of the challenge, which is half way between outreach and physics analysis, will be described.

## Summary

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**Clasificación de temáticas :**  Education and Outreach