



Irfu

Institut de recherche
sur les lois fondamentales
de l'Univers

**Séminaire
SPP**

Lundi 09/05/2016, 11h00-12h00

CEA-Saclay Bat 141, salle André Berthelot

Advances in Machine Learning tools in High Energy Physics

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LAL

Machine Learning (known as Multi Variate Analysis) has been used somewhat in HEP in the eighties, then at the Tevatron and recently at the LHC. However with the birth of internet giants at the turn of the century, there has been an explosion of Machine Learning tools in the industry, HEP being left behind. A collective effort has been started for the last couple of years to bring state-of-the-art Machine Learning tools to high energy physics, and to promote collaborations between HEP physicists and Machine Learning specialists. This seminar will give a tour d'horizon of Machine Learning in HEP : review of tools beyond root-TMVA ; example of applications, some usable immediately (e.g. cross validation, novelty detection) , some in a (possibly distant) future (e.g. deep learning, image vision) ; recent and future HEP ML competitions ; setting up frameworks for Machine Learning collaborations.

Le café sera servi 10 minutes avant.

NB : La présentation d'une pièce d'identité est exigée à l'entrée du centre. Tous les auditeurs extérieurs sont priés de prévenir à l'avance Martine Oger, tél. 01 69 08 23 50, e-mail : martine.oger@cea.fr. (U.E. : délai de 24 h, hors U.E. : délai de 4 jours).