



Contribution ID: 2

Type: **not specified**

Application of Machine Learning Techniques to Heavy-Ion Jets

Wednesday 5 February 2020 10:50 (11 minutes)

The Quark-Gluon plasma (QGP) is a state of hot and dense matter where quarks and gluons are deconfined and is produced in ultra-relativistic heavy-ion collisions. This medium can be indirectly studied by inferring its properties from the modifications suffered by jets - collimated bunches of particles resulting from the branching of energetic partons - which are created and developed within it. Additionally, Machine Learning's (ML) pervasiveness in today's world and the extreme large amount of data produced in particle collisions make the use of such techniques both a necessity and a potentially very fruitful path to follow. This project explores ML as a powerful physics discovery tool allowing to identify, from 'detector-level' information, important properties of jets modified by QGP that had escaped the imagination of theorists.

Author: SILVA, João (IST)

Presenter: SILVA, João (IST)