Martedì 10 Dicembre 2019
Aula Magna del Dipartimento di
Fisica ed Astronomia
ore 15:00

Machine Learning
in High Energy Physics

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Abstract: Human brain inspired techniques (Machine Learning or ML) are flourishing in research environments, taking advantage of recent important theoretical results, of the availability of specialised hardware and the needs for novel solutions for the appearance of problems apparently intractable with standard approaches. High Energy Physics is a field where ML has been used as a promising and intensively exploited tool, with studies performed at all levels of the activities, ranging from applications to data acquisition to offline data analysis and allowing to optimize algorithms and the use of resources, especially in the identification of events and physics objects.

In order to illustrate the variety and richness of this established research topic we start from a brief review of the landscape and its evolution and continue presenting a number of selected applications and R&D projects for both current and future HEP experiments.