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Machine learning in KM3NeT

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The KM3NeT Collaboration is building a network of water Cherenkov neutrino detectors in the Mediterranean sea, with the multiple aims of observing astrophysical sources of high energy neutrinos and studying the neutrino mass hierarchy. Various techniques of Machine Learning, such as BDTs, Random Forests, Shallow and Deep Networks are in use and/or under exploration for diverse usage, ranging from event classification, particle identification, energy/direction estimation, signal/noise discrimination, source identification and data analysis, with sound results as well as promising research paths. This effort is also linked to the H2020 ASTERICS project and future plans.

Presenter: Dr BOZZA, Cristiano (University of Salerno and INFN)

Session Classification: Machine Learning