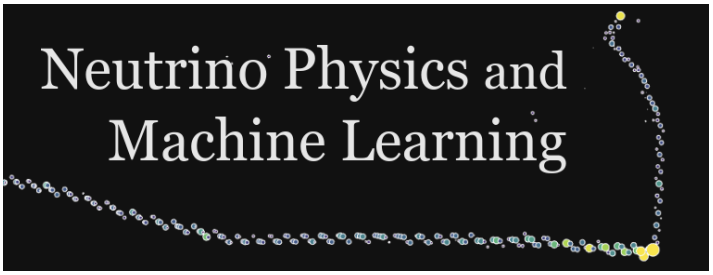

Contribution ID: **6** Type: **A collaboration/project summary talk**

ML challenges in Theia and WBLS

Friday, 10 July 2020 13:00 (40 minutes)

Theia is a proposed 25-100 kiloton multi-purpose neutrino detector using novel target materials and advanced light detection techniques to address a wide range of neutrino and rare event physics. Key to this is the ability to separate scintillation and Cherenkov light using high-precision timing photo-sensors. Water-based-liquid-scintillator (WBLS) can be used to optimise the relative ratio of both light species for this purpose. This allows to combine high energy resolution with directional information while providing unique tracking and particle-identification capabilities. Machine Learning (ML) offers a wide range of tools to unlock this potential.
In this talk we will highlight some of these ML applications and point out future directions.

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Session Classification: Day 1 Afternoon