"Towards Differentiable Physics Analysis at the HL-LHC and Beyond"

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Abstract:

With the High-Luminosity Large Hadron Collider (HL-LHC) era on the horizon for physics analysis at the LHC experiments there are multiple challenges to be overcome to efficiently analyze and extract the most

scientific value from the unique and valuable data. In this seminar I will present a high-level overview of how applications of data science tools from the modern scientific open source community, techniques and applications from the field of automatic differentiation, and strategies for enabling analysis reuse can be leveraged to tackle physics analysis at the HL-LHC scale.

