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Symbolic regression for precision LHC physics

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Machine learning, in its conventional form, has often been criticised for being a black box, providing outputs without a clear rationale. To obtain more interpretable results we can make use of symbolic regression (SR) which, as opposed to traditional regression techniques, goes beyond curve-fitting and attempts to determine the underlying mathematical equations that best describe the data. In this talk we will explore how SR can be used to infer closed form analytic expressions that can be exploited to improve the accuracy of phenomenological analysis at the LHC in the context of electroweak precision observables, such as W and Z production.

Primary authors: CONDE, Daniel (IFIC, Universidad de Valencia); BENDAVID, Josh (CERN); MORALES-ALVARADO, Manuel (University of Cambridge); MORALES-ALVARADO, Manuel (DAMTP, University of Cambridge); UBIALI, Maria (DAMTP, University of Cambridge); SANZ, Veronica (IFIC, Universidad de Valencia)

Presenter: MORALES-ALVARADO, Manuel (University of Cambridge)

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