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Semi-leptonic ttbar & ttH reconstruction using Symmetry Preserving Attention Networks at the LHC

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The reconstruction of hadronically decaying particles such as top quarks and Higgs bosons from their decay components is a complex problem which limits the sensitivity of many analyses including Higgs boson measurements and BSM searches. A novel approach to this problem, utilizing Symmetry Preserving Attention Networks (SPANet), has been previously studied for all-hadronic $t\bar{t}$ decays. In this talk, we present new features implemented in the algorithm as well as its extended application to semi-leptonic final states. Its potential impact on $ttH(\rightarrow b\bar{b})$ and $t\bar{t}$-related analyses will be shown.

You are

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