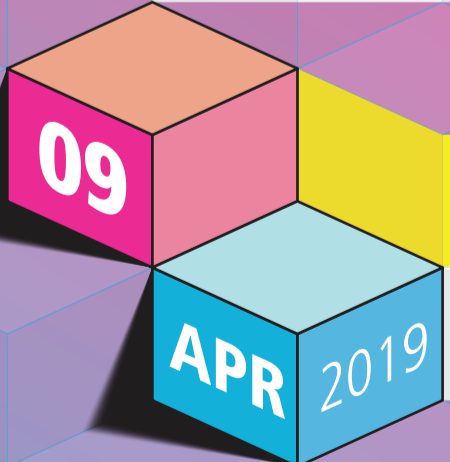


PHYSICS COLLOQUIA

2018/2019



The Large Hadron Collider (LHC) allows us to scrutinize the structure of the Standard Model (SM) of particle physics at an unprecedented level of precision. On the theoretical side, this requires very sophisticated phenomenological predictions, that match the accuracy of the data. Their computation poses serious theoretical challenges which call for a deeper understanding of quantum field theory, the mathematical framework in which the SM is formulated. In this talk, I will highlight some of the recent theoretical breakthroughs that allowed to overcome limitations of standard techniques and led to a new generation of high precision phenomenological results for the LHC. I will also illustrate how these results can be used to constrain the structure of the SM, and emphasize the increasingly important role that they are playing in searches for new physics.



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Precision phenomenology at the LHC: from quantum field theory to new physics



UNIVERSITÀ DEGLI STUDI DI MILANO
DOTTORATO DI RICERCA IN FISICA
ASTROFISICA E FISICA APPLICATA

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