



## Laura Pereira Sanchez

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### Bio

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#### BIO

The composition of the Universe and the interplay of its various forces and matter have always fascinated me. My journey into particle physics began when I joined the ATLAS Collaboration during master's. Since then, I have analyzed data from proton-proton collisions at the Large Hadron Collider (LHC), where I've been looking for novel particles and deviations from theoretical predictions. At Stanford, I study the shape of the Higgs potential. I apply state-of-the-art machine learning techniques to measure the production of Higgs boson pairs using data from the ongoing LHC run and study if the shape of the Higgs potential differs considerably from that predicted by the Standard Model (SM). Furthermore, I work on the upgrade of the ATLAS inner-tracking detector for the future High Luminosity LHC (HL-LHC), which will be crucial to study the Higgs potential if its shape aligns with the SM predictions.

#### HONORS AND AWARDS

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#### STANFORD ADVISORS

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