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Beyond particles - What the Higgs boson tells us about the universe

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The discovery of the Higgs boson in 2012 completed the particle content of the Standard Model of particle physics. This particle, however, is the only scalar particle we know of and through its unique properties and interactions it plays a critical role in the evolution of our universe. In this talk, I will discuss how the tiniest of particles can affect the development of some of the biggest structures of our universe. I will highlight how the Higgs boson interacts with other particles as well as with itself and how this self-interaction may be the critical aspect to explaining the matter to anti-matter differences that we observe today. Finally, I will touch upon the Higgs boson's connection to dark matter and how it can be used as a tool to reveal the dark universe.

Category

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