



Contribution ID: 29

Type: **Long talk (20 mins)**

## The Axion-Higgs portal

*Friday, December 16, 2022 3:00 PM (30 minutes)*

We present the Axion-Higgs portal, the unique dimension six operator that respects both a  $Z_2$  symmetry and the typical shift symmetry of an axion. Due to the  $Z_2$  symmetry, the axion is stable for all masses and serves as a natural DM candidate. We derive experimental constraints and the regions where the observed amount of DM can be produced and compare them in the parameter space. Throughout the talk, we compare the Axion-Higgs portal with the Higgs portal and axion models without the  $Z_2$  symmetry, being its closest neighbours in the space of models for BSM physics.

### Type of presentation

20 minute talk

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Beyond the Standard Model

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**Session Classification:** Full Length Talks