

I will present the latest status of non-supersymmetric models for the particle identity of dark matter, obtained from the GAMBIT global fitting project. This will cover axions, axion-like particles and scalar, vector and fermionic Higgs portal models (stabilised by either a  $Z_2$  or a  $Z_3$  discrete symmetry). The results incorporate detailed theoretical predictions of all relevant observables, along with corresponding constraints from a wide range of experiments, including the Large Hadron Collider, direct and indirect searches for dark matter, dedicated axion searches, stability of the electroweak vacuum, and the observed cosmological abundance of dark matter.