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How to find Natural Supersymmetric Dark Matter?

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Supersymmetry (SUSY) is able to solve the hierarchy problem and it can provide a perfect dark matter candidate. The non-observation of SUSY particles at the LHC and dark matter particles at dedicated experiments drives the SUSY particles to be heavier and heavier, which is assumed to make it more and more difficult for SUSY to solve the hierarchy problem as it gives rise to the need of fine-tuning of the input parameters of the theory. We are studying the allowed parameter space of several SUSY models. These models typically have a large number of parameters (10-30). We aim to find the set of allowed parameters that minimize the fine-tuning of these SUSY models. This is a resource-consuming process and we would like to discuss on how to do this more efficiently.

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