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## Double Higgs Production in Singlet Extended SM

*Tuesday 10 May 2016 14:00 (15 minutes)*

The simplest extension of the Standard Model is to add a scalar singlet. The only renormalizable interactions with the SM are then through the Higgs boson. One interesting consequence of adding the scalar singlet is that there can be resonant double Higgs production. I will give an overview of these types of models with a specific emphasis on the enhancement of the double Higgs production rate. This will include a discussion of interference effects that can be substantial for heavy scalars and the stability of the enhanced production with respect to NLO QCD corrections.

### Summary

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