XI NExT PhD Workshop: Probing fundamental physics at colliders and beyond



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A type-independent 2HDM parameter scanner

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Using the kappa formulation for the coupling strengths of the five higgses to quarks and W bosons we aim to construct a toolbox to work alongside MadGraph that will enable the user to scan over various variables including the titular kappas and calculate the cross-sections at each of these parameter points. In doing this we can highlight regions with large excess compared to the SM that would be a key area to search for the existence of **any** 2HDM model type. 2HDMC, HiggsBounds and HiggsSignals are used to verify that parameter points have not yet been excluded.

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