

Combine Tool Tutorial I

Tuesday 2 April 2024 14:00 (1h 30m)

Plan for Tutorial parts I - IV:

In this tutorial we will go through the main features of the Combine software package which provides a command-line interface to many different statistical techniques, available inside RooFit/RooStats, that are used widely inside CMS.

In the first part of the tutorial we'll explain the format of the Combine configuration file (datacard), and then discuss how to set up a simple counting experiment, followed by the shape analysis setup using ROOT histograms as inputs. Then we'll look at how to build simultaneous fits using independent categories, add systematic uncertainties and extract the limits or uncertainty estimates for the parameters of interest. Second part of the tutorial describes how to construct parametric models with RooFit and extract the measurements using Combine.

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