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Contribution ID: **3340** Type: **Oral Competition (Graduate Student) / Compétition orale (Étudiant(e) du 2e ou 3e cycle)**

(G*) FeynArtsHelper- a Mathematica package for phenomenological calculations

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The incompleteness of the Standard Model demands new physical models, and one of the most tested approaches is perturbative Quantum Field Theory (QFT), where we can calculate observables from a given Lagrangian. It is well known that at a given order of perturbation theory, matrix elements can be calculated using Feynman calculus. Existing Mathematica packages such as FeynArts and FormCalc help us create those diagrams from a pre-programmed model file in the package, which can perform a wide variety of calculations for the Standard Model. This presentation will present a short overview of a new Wolfram Mathematica package, FeynArtsHelper, intended to help create those model files for FeynArts using arbitrary given Lagrangian. As a result, the package can be employed for the models Beyond Standard Model and produce results up to one-loop order.

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