

## Recent developments in GENIE

The international GENIE Collaboration maintains and develops an extensive software suite to meet the simulation needs of the broad neutrino community. GENIE develops a universal event generator simulating neutrino interactions from MeV to PeV energy scales, and a global analysis of neutrino scattering data used for model characterization, tuning and uncertainty evaluations. In recent years, there were significant advances towards a) the construction and characterisation of several alternative comprehensive neutrino interaction models in the GeV energy range, b) the tuning and evaluation of uncertainties for key modelling elements, c) the implementation of more rare neutrino scattering processes, d) the development of extensions for low and ultra high energy neutrinos, e) the validation and improvement of complementary electron scattering simulations, and f) the implementation within GENIE of BSM simulations, such as the simulation of dark neutrinos, boosted dark matter and heavy neutral leptons. This talk presents selected highlights from these ongoing developments.

### Working Group

WG 2: Neutrino Scattering Physics

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