

Exhaustive neural importance sampling applied to Monte Carlo event generation

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The generation of accurate neutrino-nucleus cross section models needed for neutrino oscillation experiments requires simultaneously the description of many degrees of freedom and precise calculations to model nuclear responses. The detailed calculation of complete models makes the Monte Carlo generators slow and impractical. We present exhaustive neural importance sampling, a method based on normalizing flows to find a suitable proposal density for rejection sampling automatically and efficiently, and discuss how this technique solves common issues of the rejection algorithm

Working group

WG2

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