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A NEW EVOLUTIONARY ALGORITHM FOR OPTIMIZING THE SEARCH OF A RARE HIGGS BOSON PRODUCTION CHANNEL

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This paper describes the results of applying an evolutionary algorithm to optimize the hyperparameters of a neural network solving the problem of separating the rare Higgs boson birth process in association with a single top quark $pp \to tH(H \to bb)$ from the main background processes $pp \to tt, ttH, tZbq$.

Описываются результаты применения эволюционного алгоритма для оптимизации гиперпараметров нейронной сети, решающей задачу разделения редкого процесса рождения бозона Хиггса в ассоциации с одиночным топ-кварком $pp \to tH(H \to bb)$ и основных фоновых процессов $pp \to tt, ttH, tZbq$.

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