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ABC for galaxy star formation history model choice

vendredi 20 septembre 2019 11:30 (45 minutes)

We are interested in the bayesian model choice problem when a large number of objects have to be processed. We propose an extension of the ABC-RandomForest algorithm for model choice, based on crossentropy minimization on the ABC simulation catalogue. This learning algorithm allows us to bypass the use of summary statistics for ABC. We present an application in astrophysics. From photometric data, we show the relevance of the complexification of a stellar formation history model for an important part of the datasets among tens of thousands of galaxies.

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