

## **Trans-dimensional sampling methods: current status and future prospects**

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Trans-dimensional Bayesian sampling algorithms have been extensively used in the analysis of simulated LISA data. So far, tools based on Reversible Jump MCMC methods, have been proven to be a good candidate for tackling the LISA *global fit problem*. In this talk, I will summarize the success of the techniques that have been used to date, as well as their current limitations. These limitations will also become our starting point for discussing the future prospects of such algorithms, during the emerging era of Machine Learning techniques.

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