

## Fourth MODE Workshop on Differentiable Programming for Experiment Design



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### Multivariate two-sample tests from univariate integral probability measures

*Tuesday 24 September 2024 18:25 (1h 35m)*

I will present and discuss several proposed metrics, based on integral probability measures, for the evaluation of generative models (and, more generally, for the comparison of different generators). Some of the metrics are particularly efficient to be computed in parallel and show good performances. I will first compare the metrics on toy multivariate/multimodal distributions, and then focus on HEP examples from the JetNet jet dataset. I will discuss the power of the tests and their implementation, taking the opportunity to discuss, more generally, the limitations in the usage of generative models in HEP.

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