ID de Contribution: **49**   Type: **Non spécifié**

swyft Parameter Inference of Gravitational Waves using Machine Learning

mardi 31 mai 2022 11:00 (20 minutes)

In light of the importance of multi-wavelength characterization of gravitational wave sources, fast parameter inference of gravitational waves is a necessity. However, traditional methods like MCMC take several days to weeks for full parameter inference of GWs. After the promise of GW170817 and the associated multi-wavelength follow-up, the LVC promises several more such detectionsin the upcoming observing run.

We present a faster ($O(s)$) alternative to traditional samplers by using Neural Ratio Estimation to estimate marginals in the ~15D parameter space of a GW signal. For our purposes, we use the ***swyft*** code and produce results comparable to robust, traditional samplers in a fraction of the time, thus aiding in the quest for low latency EM follow-up.

Auteur principal: BHARDWAJ, Uddipta (GRAPPA, University of Amsterdam)

Orateur: BHARDWAJ, Uddipta (GRAPPA, University of Amsterdam)

Classification de Session: Contributed Talks