



Contribution ID: 150

Type: **Flashtalk with Poster**

PolySwyft: a sequential simulation-based nested sampler

Tuesday, 30 April 2024 14:28 (3 minutes)

PolySwyft is an implementation of a sequential simulation-based nested sampler by merging two algorithms that are commonly used for Bayesian inference: PolyChord and swyft. PolySwyft uses the NRE functionality of swyft and generates a new joint training dataset with PolyChord to iteratively estimate more accurate posterior distributions. PolySwyft can be terminated using pre-defined rounds similar to swyft or be executed in an automated mode using a KL-divergence termination criterion between current posterior estimates. We demonstrate the capabilities of PolySwyft on multimodal toy problems where the ground truth posterior is known.

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Session Classification: 1.3 Simulation-based inference

Track Classification: Session A