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Approximate Bayesian Computing

Thursday, 31 October 2019 17:30 (1h 30m)

This lecture will provide an overview of approximate Bayesian computation (ABC), starting with a focus on the motivation for the procedure, including when it makes sense to utilize it. The resulting approximation can be thought of as calculating the posterior under a contaminated data set; this interpretation provides a useful context for the procedure. The main challenge to using the approach is the computational difficulties, so the lecture will cover algorithms that ease this burden, including consideration of sequential Monte Carlo approaches, and the importance of careful choice of summary statistics.

Presenter: SHAFER, Chad (CMU)

Session Classification: Session 7