

Numerical integrators for the Hamiltonian Monte Carlo method

Tuesday, 18 June 2019 09:15 (45 minutes)

The Hamiltonian Monte Carlo method is a widely popular technique for obtaining samples from arbitrary probability distributions. The method is based on integrating a system of Hamiltonian differential equations and its computational cost depends almost exclusively on the efficiency of the numerical integrator used to simulate the Hamiltonian dynamics. In the talk I'll describe the specific features of the required numerical integration and the construction of algorithms tailored to the task.

Primary author: SANZ-SERNA, Jesus Maria (Universidad Carlos III de Madrid)

Presenter: SANZ-SERNA, Jesus Maria (Universidad Carlos III de Madrid)