

CRM APPLIED MATHEMATICAL PHYSICS (CAMP) SEMINARS



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Fail-Safe Hamiltonian Monte Carlo

Popularity of Hamiltonian Monte Carlo (HMC) has been growing with increasing interest to the probabilistic models in Machine Learning. Performance of HMC, however, strongly relies on a choice of parameters associated with an integration method for underlying Hamiltonian equations, which up to date remains mainly heuristic. We introduce a novel approach (we call it s-AIA) that detects a system specific splitting integrator with a complete set of reliable parameters to be readily used in a production simulation. The method automatically eliminates those values of simulation parameters, which could cause undesired extreme scenarios, such as resonance artefacts, low accuracy or poor sampling.

Date:	June 7, 2019
Place:	Room C1/028
Time:	12:00

