

CRUNCH Seminars at Brown, Division of Applied Mathematics

Friday – July 26, 2019

When multiscale computation, Parareal and PINN have a party

Zhen Li

I will briefly introduce two recent works on applying the parareal algorithm to accelerate stochastic particle-based simulations (collaborated with Ansel Blumens), and to accelerate long-time integration of PDEs using PINN (collaborated with Xuhui Meng), in both cases the idea of multiscale modeling, i.e., a fine-scale model driven by its coarse-grained/mean-field models, is used to achieve an optimal speedup.