Department of Mathematics and Statistics Colloquium

Affine Invariant Stochastic Optimization

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Abstract: The fast and accurate optimization of noisy functions is a challenging problem with a wide range of applications. We will present recent developments in the valuation of financial instrument and machine learning parameter estimation. The unifying theme is a stochastic optimization algorithm, with a built-in approximation of the inverse Hessian matrix of the objective function. Most of the computational work on each step of this algorithm is plain matrix-vector multiplication, and therefore full parallelization using a GPU is feasible.

Monday, September 14 at 3:45 in Roop 103

refreshments at 3:30