

# STOCHASTIC PROXIMAL METHODS FOR ONLINE LEARNING

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In this talk I will present recent advances on the convergence properties of a class of stochastic proximal gradient algorithms for solving minimization problems. These algorithms are easy to implement and suitable for solving high dimensional problems thanks to the low memory requirement of each iteration. Moreover, they are particularly suitable for composite optimization, where a convex objective function is the sum of a smooth and a non-smooth component. I will show that this algorithm can be naturally applied to solve standard online machine learning algorithms and I will focus on convergence in expectation and convergence almost surely of the iterates.