

# On stochastic methods for solving large scale systems of ill-posed equations

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We investigate a family of stochastic gradient type methods for solving systems of linear ill-posed equations. The method under consideration is a stochastic version of the projective Landweber-Kaczmarz (PLWK) method in [Leitao/Svaiter, Inv. Probl. 2016] (see also [Leitao/Svaiter, NFAO 2018]). In the case of exact data, mean square convergence to zero of the iteration error is proven. In the noisy data case, we couple our method with an a priori stopping rule and characterize it as a regularization method for solving systems of linear ill-posed operator equations.