

# Regularization methods : an application in Matrix Completion with Lipschitz loss functions

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We obtain bounds on estimation error rates for regularization procedures with respect to Lipschitz loss and any regularization function. We develop two different frameworks : subgaussian or bounded case. The second one is particularly relevant for matrix completion : in this case, we are able to derive fast rates for hinge loss and quantile loss that were not available before. We show that it works well in practice in many different simulations.