

Abstract: The SLOPE estimator is defined as the minimizer of the penalized residual sum of squares where the penalty is the SLOPE norm (a generalization of the l_1 norm). Because the objective function is not strictly convex the uniqueness of the minimizer is not obvious. In this presentation we give a necessary and sufficient condition under which the uniqueness of the minimizer occurs. In addition, we show how a geometric condition involving the sign permutahedron gives insights about the accessible models for SLOPE estimator.