
YUEN-LAM (VRIS) CHEUNG, University of Colorado Boulder
Efficient and Accurate Solutions for Linear Programs with Bound Constraints

We consider linear programs with lower and upper bound constraints on the variables. We use a nullspace representation for the primal linear constraints, which allows for a system that is well-conditioned as the barrier parameter goes to zero. We also use a single dual variable for each upper and lower bound pair, rather than one variable for each bound. This reduces the size of the linear system to solve at each iteration.

This is joint work with Michael Saunders and Henry Wolkowicz.