

1098-49-194

Tor G. J. Myklebust (tmyklebu@csclub.uwaterloo.ca), Dept. of Combinatorics and Optimization, Faculty of Mathematics, 200 University Avenue West, Waterloo, Ontario N2L3G1, Canada, and **Levent Tunçel*** (ltuncel@math.uwaterloo.ca), Dept. of Combinatorics and Optimization, Faculty of Mathematics, 200 University Avenue West, Waterloo, Ontario N2L3G1, Canada. *Elements of Primal-Dual Interior-Point Methods for Hyperbolic Cone Programming and Beyond.*

I will first discuss some of the fundamental ingredients of primal-dual interior-point methods for convex optimization in conic form. Then, I will focus on those convex optimization problems which can be formulated by utilizing convex cones which are hyperbolicity cones of some hyperbolic polynomials. Then, I will present some interior-point algorithms and their theoretical features including their iteration complexity analyses. (Received January 25, 2014)