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Bo Han* (bo.han@wsu.edu), **Hongbo Dong** and **Ari Ariyawansa**. *Interior point methods for two-stage stochastic semidefinite programming in dual standard form.*

We consider interior point methods for two-stage stochastic semidefinite programming. In (Jin, Ariyawansa, and Zhu, 2012) the authors have proposed a polynomial time homogeneous self dual algorithm for two stage stochastic semidefinite programming (SSDP) with recourse in primal standard form by exploiting its structure in the computation of search directions. However, in much applications problems are more naturally modeled in the dual standard form. We show that SSDP in dual standard form has a different structure, and the algorithm for the primal standard form does not directly apply. Then, the homogeneous self dual algorithm for SSDP in dual standard forms will be developed. We also provide an implementation in the Mehrotra predictor-corrector framework. Our numerical results show that our algorithm is effective in exploiting the block structure and outperforms standard SDP solvers when the number of scenarios is large. (Received February 28, 2017)