Dimension-reduced Interior Point Method

Discussion 9

October 6, 2022

Done:

- LP interface
- Trust-region solver
- Potential reduction framework
 - Gradient-momentum type

Doing:

- Lanczos negative curvature method
- The support prediction method
- Debugging
- Abstract Ruiz-scaling

Performance

- 20 to 50 times faster than raw MATLAB implementation
- Higher accuracy using specialized implementation tricks