

Yamashita, Makoto; Fujisawa, Katsuki; Kojima, Masakazu

Implementation and evaluation of SDPA 6.0 (SemiDefinite Programming Algorithm 6.0).

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Summary: SDP (semidefinite programming) is one of the most attractive optimization models. It has many applications from various fields such as control theory, combinatorial and robust optimization, and quantum chemistry. SDPA (semidefinite programming algorithm) is a software package for solving general SDPs based on primal-dual interior-point methods with the HRVW/KSH/M search direction. It is written in C++ with the help of LAPACK for numerical linear algebra for dense matrix computation. The purpose of this paper is to present a brief description of the latest version of the SDPA and its performance for large scale problems through numerical experiments and comparisons with some other major software packages for general SDPs.

MSC:

[90C22](#) Semidefinite programming

[90-04](#) Software, source code, etc. for problems pertaining to operations research and mathematical programming

Cited in **37** Documents

Keywords:

[Semidefinite Program](#); [Interior-point Method](#); [Optimization](#); [Software](#); [Numerical Experiment](#)

Software:

[CSDP](#); [LAPACK](#); [Meschach](#); [SDPA](#); [SDPLIB](#); [SeDuMi](#)

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