

TOMLAB /PENSDP and TOMLAB /PENBMI solves large, sparse linear semidefinite programming problems with linear constraints. The toolboxes are developed in cooperation with PENOPT Gbr and researchers Michal Kocvara and Michael Stingl, University of Erlangen-Nürnberg.

Features and Capabilities

PENSDP

- Four different input formats may be used for problem formulation: The standard sparse SDPA format used in SDPLIB, the PENSDP Structural Format, the TOMLAB format for semidefinite problems, as well as the modeling engine tomSym.
- Problems defined in SeDuMi Matlab format may easily be converted to SDPA format and solved by TOMLAB /PENSDP. A conversion routine called writesdp has been written by Brian Borchert.
- Apart from solving the SDP problem, the user can check feasibility of the system of linear matrix inequalities.

PENBMI

- Three different input formats may be used for problem formulation: The PENBMI Structural Format, an extension of PENSDP format for linear problems, TOMLAB format for semidefinite problems and models built with tomSym.
- Apart from solving the BMI problem, the user can check feasibility of the system of linear and bilinear matrix inequalities.

Common Features and Capabilities

- TOMLAB /PENSDP and TOMLAB /PENBMI are integrated with the TOMLAB environment.
- TOMLAB /PENSDP and TOMLAB /PENBMI solvers may be used as subproblem solver in the TOMLAB environment.
- The softwares are available for MATLAB 6.5 or later.

Tomlab Optimization Inc.

1260 SE Bishop Blvd Ste E, Pullman, WA 99163-5451, USA
Tel: +1 (509) 320-4213, Fax: +1 (619) 245-2476
Email: us@tomopt.com, <http://tomopt.com>

Tomlab Optimization AB

Västerås Tech Park, Trefasgatan 4, SE-721 30 Västerås, Sweden
Tel: +46 (21) 118118, Fax: +1 (619) 245-2476
Email: tomlab@tomopt.com, <http://tomopt.com>