

Solve your problems with

PENLAB

software package for nonlinear (and) semidefinite optimization

It is

- ✓ free (under GNU¹ license)
- ✓ open source
- ✓ fully coded in Matlab²

It uses

- ✓ verified algorithms from PENSDP, PENBMI and PENNON³

Pre-programmed interfaces for

- ✓ linear and bilinear SDP
- ✓ nonlinear optimization with AMPL⁴ input

Other features

- ✓ YALMIP⁵ compatibility for LMI and BMI
- ✓ SeDuMi⁶ and SDPA input

It solves

- ✓ nonlinear continuous optimization problems
- ✓ linear matrix inequalities
- ✓ bilinear matrix inequalities
- ✓ polynomial matrix inequalities
- ✓ nonlinear semidefinite programming problems

Pre-programmed applications

- ✓ nearest correlation matrix
- ✓ Lyapunov stability
- ✓ static output feedback
- ✓ truss topology optimization

**PENLAB =
NLP+LMI+BMI+PMI+SDP**

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³ <http://www.penopt.com> and <http://www.nag.co.uk>

⁴ <http://www.ampl.org>

⁵ <http://users.isy.liu.se/johanl/yalmip>

⁶ <https://github.com/sedumi>