Practical problem:

The problem is adapted from Engineering optimization theory and practice by Rao from chapter 1 example 1.31:

The problem is of a four-bar truss with three members having the same cross-sectional area and length while the last has different ones. Using static analysis of forces the following system is produced

Subject to

Solution using my implementation

Comparing with Matlab SQP:

For the constrained Rosen Brock problem:

1. Same optimal point at
2. Function value
3. Elapsed time