Raw Data for manuscript: Globally solving Non-Convex Quadratic Programs via Linear Integer Programming techniques

Wei Xia

Industrial and Systems Engineering, Lehigh University, Bethlehem, PA, USA, wex213@lehigh.edu

Juan C. Vera

 $\label{thm:constraint} \begin{tabular}{ll} Tilburg School of Economics and Management, Tilburg University, Tilburg, The Netherlands, j.c.veralizcano@uvt.nl, $$ $$ http://www.tilburguniversity.edu/webwijs/show/?uid=j.c.veralizcano.$

Luis F. Zuluaga

 $\label{lem:condition} Industrial and Systems \ Engineering, Lehigh \ University, \ Bethlehem, PA, \ USA, \ luis.zuluaga@lehigh.edu, \\ http://coral.ie.lehigh.edu/\sim luiszuluaga/$

1. Raw Data for Figure 1: SQP instances

| | Solution Time (s) | | | |
|--|-------------------|------------|-------|---------|
| SQP instance | quadprogIP | quadprogBB | CPLEX | BARON |
| spar020-100-1.mat: | 0.35 | 3.74 | 0.21 | 3.21 |
| spar020-100-2.mat: | 0.30 | 1.67 | 0.45 | 1.58 |
| spar 0 20 100 3. mat: | 0.29 | 1.83 | 0.32 | 1.62 |
| $spar 0 30 \hbox{-} 0 60 \hbox{-} 1. mat:$ | 0.33 | 2.52 | 1.39 | 96.71 |
| $spar 0 30 \hbox{-} 0 60 \hbox{-} 2. mat:$ | 0.40 | 2.67 | 0.74 | 78.08 |
| spar 0 3 0-060-3. mat: | 0.30 | 2.38 | 4.34 | 817.65 |
| spar 0 30 0 70 1. mat: | 0.27 | 2.65 | 1.08 | 105.43 |
| spar 0 30 0 70 2. mat: | 0.34 | 2.75 | 4.05 | 514.11 |
| spar030-070-3.mat: | 0.48 | 2.80 | 7.33 | 826.13 |
| spar 0 3 0 - 0 8 0 - 1.mat: | 0.28 | 2.87 | 1.86 | 562.91 |
| spar 0 3 0 - 0 8 0 - 2. mat: | 0.44 | 3.00 | 5.29 | 467.36 |
| spar 0 3 0 - 0 8 0 - 3. mat: | 0.27 | 2.99 | 3.04 | 2199.81 |
| spar 0 3 0 - 0 9 0 - 1.mat: | 0.28 | 3.08 | 1.12 | 4102.65 |
| spar 0 3 0 - 0 9 0 - 2. mat: | 0.37 | 2.82 | 1.73 | 1501.69 |
| spar 0 3 0 - 0 9 0 - 3. mat: | 0.51 | 2.77 | 1.54 | 1419.12 |
| spar 0 3 0 - 1 0 0 - 1 . mat: | 0.36 | 2.92 | 0.45 | 57.64 |
| spar 0 3 0 - 1 0 0 - 2. mat: | 0.50 | 6.86 | 0.16 | 15.87 |
| spar030-100-3.mat: | 0.57 | 2.86 | 0.73 | 20.12 |
| spar040-030-1.mat: | 0.27 | 8.49 | 0.70 | 11.38 |
| spar040-030-2.mat: | 0.42 | 10.93 | 1.00 | 103.73 |
| spar040-030-3.mat: | 0.38 | 3.94 | 1.47 | 130.44 |

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| | Solution Time (s) | | | | |
|--|-------------------|----------------|-------------|----------------|--|
| SQP instance | quadprogIP | quadprogBB | CPLEX | BARON | |
| spar040-040-1.mat: | 0.42 | 3.87 | 1.16 | 49.93 | |
| spar 0 40 - 0 40 - 2.mat: | 0.55 | 4.00 | 1.41 | 191.37 | |
| spar 0 40 - 0 40 - 3.mat: | 0.45 | 4.02 | 1.83 | 178.60 | |
| spar 0 40 - 0 50 - 1.mat: | 0.47 | 4.19 | 2.19 | 299.80 | |
| spar 0 40 - 0 50 - 2.mat: | 0.29 | 4.19 | 4.31 | 932.07 | |
| spar 0 40 - 0 50 - 3. mat: | 0.29 | 6.59 | 4.68 | 1003.62 | |
| spar 0 40 - 0 60 - 1.mat: | 0.32 | 4.46 | 15.54 | 2359.39 | |
| spar 0 40 - 0 60 - 2.mat: | 0.32 | 6.80 | 13.99 | 3372.87 | |
| spar 0 40 - 0 60 - 3. mat: | 0.42 | 4.66 | 66.62 | - | |
| spar 0 40 - 0 70 - 1.mat: | 0.43 | 4.30 | 23.74 | 3615.45 | |
| spar040-070-2.mat: | 0.42 | 4.85 | 41.50 | 9762.20 | |
| spar 0 40 - 0 70 - 3. mat: | 0.35 | 4.75 | 108.69 | - | |
| spar040-080-1.mat: | 0.54 | 4.68 | 110.39 | - | |
| spar040-080-2.mat: | 0.34 | 4.54 | 91.22 | - | |
| spar040-080-3.mat: | 0.44 | 5.12 | 193.68 | - | |
| spar040-090-1.mat: | 0.38 | 5.51 | 6.68 | - | |
| spar040-090-2.mat: | 0.33 | 5.38 | 3.80 | - | |
| spar040-090-3.mat: | 0.77 | 5.39 | 3.52 | - | |
| spar040-100-1.mat: | 0.70 | 8.80 | 3.13 | - | |
| spar040-100-2.mat: | 0.40 | 6.11 | 1.24 | - | |
| spar040-100-3.mat: | 0.49 | 5.95 | 1.74 | - | |
| spar050-030-1.mat: | 0.49 | 6.05 | 1.47 | 104.77 | |
| spar050-030-2.mat: | 0.53 | 6.85 | 3.40 | 384.22 | |
| spar050-030-3.mat: | 0.80 | 6.02 | 2.75 | 309.83 | |
| spar050-040-1.mat: | 0.63 | 7.30 | 3.23 | 402.60 | |
| spar050-040-2.mat: | 0.58 | 7.58 | 19.23 | - | |
| spar050-040-3.mat: | 0.53 | 6.63 | 17.08 | 2448.08 | |
| spar050-050-1.mat: | 0.79 | 7.40 | 30.75 | 1796.12 | |
| spar050-050-2.mat: | 0.51 | 7.82 | 28.55 | - | |
| spar050-050-3.mat: | 0.54 | 8.20 | 50.01 | - | |
| spar060-020-1.mat: | 0.69 | 9.67 | 1.80 | 52.54 | |
| spar060-020-2.mat: | $0.51 \\ 0.35$ | 10.13 22.48 | 2.33 1.42 | 161.26 67.21 | |
| spar060-020-3.mat: | 0.59 | 28.75 | 14.08 | 2177.72 | |
| spar070-025-1.mat: spar070-025-2.mat: | 0.39 0.47 | 29.18 | 7.38 | 8256.45 | |
| spar070-025-2.mat: | 0.47 | 16.85 | 22.14 | 2313.28 | |
| spar070-025-3.mat. spar070-050-1.mat: | 0.58 | 29.47 | 2399.70 | 2010.20 | |
| spar070-050-1.mat. spar070-050-2.mat: | 0.93 | 25.17 | 1531.79 | - | |
| spar070-050-2.mat: | 0.55 | 33.46 | 6975.80 | _ | |
| spar070-030-3.mat: spar070-075-1.mat: | 1.26 | 47.45 | 0910.00 | _ | |
| spar070-075-1.mat. | 0.84 | 52.01 | _ | _ | |
| spar070-075-3.mat | 1.15 | 38.10 | _ | _ | |
| spar080-025-1.mat: | 0.79 | 29.71 | 177.18 | _ | |
| spar080-025-2.mat: | 0.66 | 43.03 | 30.27 | 2620.38 | |
| spar080-025-3.mat: | 0.73 | 27.81 | 40.08 | 5193.83 | |
| spar080-050-1.mat: | 0.97 | 40.11 | - | - | |
| spar080-050-2.mat: | 1.28 | 45.31 | _ | _ | |
| spar080-050-3.mat: | 1.01 | 52.50 | _ | _ | |
| spar080-075-1.mat: | 1.35 | 87.90 | _ | _ | |
| spar080-075-2.mat: | 1.41 | 77.95 | _ | _ | |
| spar080-075-3.mat: | 1.82 | 76.96 | _ | _ | |
| spar090-025-1.mat: | 1.12 | 51.04 | 276.75 | _ | |
| spar090-025-2.mat: | 1.32 | 47.05 | 633.59 | _ | |
| spar090-025-3.mat: | 1.21 | 85.45 | 309.18 | _ | |
| spar090-050-1.mat: | 0.71 | 82.55 | - | _ | |
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| | Solution Time (s) | | | | |
|--|-------------------|------------|---------|-------|--|
| SQP instance | quadprogIP | quadprogBB | CPLEX | BARON | |
| spar090-050-2.mat: | 1.25 | 74.12 | - | - | |
| spar 090-050-3.mat: | 0.99 | 82.43 | - | - | |
| spar 090-075-1.mat: | 1.56 | 164.02 | - | - | |
| spar 090-075-2.mat: | 0.89 | 147.09 | - | - | |
| spar 090-075-3.mat: | 1.59 | 162.81 | - | - | |
| spar100-025-1.mat: | 1.46 | 87.64 | 1197.12 | - | |
| spar100-025-2.mat: | 1.45 | 91.12 | 3676.38 | - | |
| spar100-025-3.mat: | 1.03 | 74.53 | 2522.39 | - | |
| spar100-050-1.mat: | 1.37 | 135.48 | - | - | |
| spar100-050-2.mat: | 1.41 | 158.00 | - | - | |
| spar100-050-3.mat: | 1.15 | 149.19 | - | - | |
| spar 100-075-1.mat: | 1.61 | 207.61 | - | - | |
| $spar 100 \hbox{-} 075 \hbox{-} 2. mat:$ | 1.45 | 191.12 | - | - | |
| spar100-075-3.mat: | 2.10 | 204.97 | - | _ | |

Table 1: Solution time in seconds for SQP instances. Dash "-" indicates that solver was unable to solve the instance within the maximum allowed time of 10^4 s.

2. Raw Data for Figure 2: SQP30 and SQP50 instances

| | Solution Time (s) | | | |
|--|-------------------|------------|---------|---------|
| SQP instance | quadprogIP | quadprogBB | CPLEX | BARON |
| triangular_3010_0501_mixDiag.mps.mat: | 0.50 | 6.95 | 46.41 | 153.26 |
| $triangular_30\10_0\5__01_negDiag.mps.mat:$ | 0.38 | 4.80 | 46.27 | 153.32 |
| $triangular_30\10_0\5__01_posDiag.mps.mat:$ | 0.44 | 4.20 | - | 6108.41 |
| $triangular_30\10_0\5__02_mixDiag.mps.mat:$ | 0.44 | 4.59 | 102.76 | 213.93 |
| $triangular_30\10_0\5__02_negDiag.mps.mat:$ | 0.48 | 4.55 | 102.07 | 213.74 |
| $triangular_30\10_0\5__02_posDiag.mps.mat:$ | 0.67 | 2.87 | - | - |
| $triangular_30\10_0\5__03_mixDiag.mps.mat:$ | 0.69 | 8.79 | 38.43 | 134.79 |
| $triangular_30\10_0\5__03_negDiag.mps.mat:$ | 0.49 | 5.47 | 39.39 | 134.90 |
| $triangular_30\10_0\5__03_posDiag.mps.mat:$ | 0.61 | 4.60 | - | 4669.28 |
| $triangular_30\10_0\5__04_mixDiag.mps.mat:$ | 0.43 | 3.26 | 31.82 | 162.39 |
| $triangular_30\10_0\5__04_negDiag.mps.mat:$ | 0.41 | 5.37 | 32.23 | 162.36 |
| $triangular_30\10_0\5__04_posDiag.mps.mat:$ | 0.60 | 3.32 | - | - |
| $triangular_30\10_0\5__05_mixDiag.mps.mat:$ | 0.64 | 3.31 | 16.13 | 39.37 |
| $triangular_30\10_0\5__05_negDiag.mps.mat:$ | 0.61 | 3.18 | 15.65 | 39.35 |
| $triangular_30\10_0\5__05_posDiag.mps.mat:$ | 0.61 | 4.89 | - | - |
| $triangular_30\10_0\5__06_mixDiag.mps.mat:$ | 0.69 | 3.83 | 136.16 | 519.53 |
| $triangular_30\10_0\5__06_negDiag.mps.mat:$ | 0.72 | 3.31 | 134.87 | 519.48 |
| $triangular_30\10_0\5__06_posDiag.mps.mat:$ | 0.70 | 4.85 | 6367.29 | 8103.27 |
| $triangular_3010_05_07_mixDiag.mps.mat:$ | 0.49 | 4.29 | 39.55 | 95.96 |
| triangular_3010_0507_negDiag.mps.mat: | 0.50 | 4.14 | 39.65 | 95.94 |
| triangular_3010_0507_posDiag.mps.mat: | 0.69 | 7.36 | - | _ |
| triangular_3010_0508_mixDiag.mps.mat: | 0.53 | 8.30 | 20.51 | 75.06 |
| triangular_3010_0508_negDiag.mps.mat: | 0.45 | 4.94 | 19.14 | 75.11 |
| triangular_3010_0508_posDiag.mps.mat: | 0.45 | 2.94 | - | _ |
| triangular_3010_0509_mixDiag.mps.mat: | 0.44 | 5.11 | 46.91 | 204.83 |
| triangular_3010_0509_negDiag.mps.mat: | 0.42 | 4.91 | 46.67 | 204.91 |
| triangular_3010_0509_posDiag.mps.mat: | 0.95 | 4.67 | - | - |
| triangular_3010_0510_mixDiag.mps.mat: | 0.48 | 3.28 | 58.72 | 113.36 |
| triangular_3010_0510_negDiag.mps.mat: | 0.44 | 2.90 | 58.89 | 113.39 |
| | | | | |

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| | Solution Time (s) | | | |
|--|-------------------|---------------------|--------------|---------------|
| SQP instance | quadprogIP | quadprogBB | CPLEX | BARON |
| triangular_3010_0510_posDiag.mps.mat: | 0.64 | 4.82 | - | - |
| $triangular_30\10_10\3__01_mixDiag.mps.mat:$ | 0.41 | 7.54 | 4.60 | 58.52 |
| $triangular_30\10_10\3__01_negDiag.mps.mat:$ | 0.52 | 3.07 | 1.47 | 13.57 |
| $triangular_30\10_10\3__01_posDiag.mps.mat:$ | 0.47 | 2.78 | 8.67 | 142.28 |
| triangular_3010_10302_mixDiag.mps.mat: | 0.40 | 2.91 | 1.91 | 12.46 |
| triangular_3010_10302_negDiag.mps.mat: | 0.44 | 3.01 | 2.21 | 7.90 |
| triangular_3010_10302_posDiag.mps.mat: | 0.53 | 2.73 | 3.31 | 48.02 |
| triangular_3010_10303_mixDiag.mps.mat: | 0.34 | 4.98 | 4.24 | 48.93 |
| triangular_3010_10303_negDiag.mps.mat: | 0.43 | 2.91 | 1.41 | 9.00 |
| triangular_3010_10303_posDiag.mps.mat: | 0.38 | 3.11 | 5.92 | 83.42 |
| triangular_3010_10304_mixDiag.mps.mat: | 0.53 | 2.89 | 1.42 | 13.03 |
| triangular_3010_10304_negDiag.mps.mat: | 0.49 | 5.08 | 1.32 | 8.97 |
| triangular_3010_10304_posDiag.mps.mat: | 0.44 | 2.69 | 1.75 | 13.82 |
| triangular_3010_10305_mixDiag.mps.mat: | 0.45 | 3.09 | 4.13 | 24.42 |
| triangular_3010_10305_negDiag.mps.mat: | 0.41 | 3.12 | 2.12 | 13.96 |
| triangular_3010_10305_posDiag.mps.mat: | 0.47 | 2.79 | 8.79 | 123.63 |
| triangular_3010_10306_mixDiag.mps.mat: | 0.43 | 2.86 | 2.96 | 36.40 |
| triangular_3010_10306_negDiag.mps.mat: | 0.32 | 3.01 | 3.54 | 52.05 |
| triangular_3010_10306_posDiag.mps.mat: | 0.35 | 2.92 | 9.49 | 207.61 |
| triangular_3010_10307_mixDiag.mps.mat: | 0.28 | 4.63 | 2.28 | 18.88 |
| triangular_3010_10307_negDiag.mps.mat: | 0.38 | 2.90 | 1.83 | 18.40 |
| triangular_3_010_10307_posDiag.mps.mat: | 0.60 | 5.13 | 4.32 | 33.48 |
| triangular 30-10-10-3-08 mixDiag.mps.mat: | 0.50 | 3.20 | 2.14 | 14.03 |
| triangular_3010_10308_negDiag.mps.mat: | 0.41 | 5.44 | 1.92 | 28.06 |
| triangular_3010_10308_posDiag.mps.mat: | 0.51 | 5.13 | 40.67 | 334.49 |
| triangular_3010_10309_mixDiag.mps.mat: triangular_3010_10309_negDiag.mps.mat: | $0.33 \\ 0.30$ | 3.16 3.13 | 1.77 1.06 | 16.17 17.00 |
| triangular_3010_10309_posDiag.mps.mat: triangular_3010_10309_posDiag.mps.mat: | 0.39 | 2.90 | 1.00 11.69 | 298.00 |
| triangular_3010_10310_mixDiag.mps.mat: | 0.39 | 2.83 | 11.09 1.36 | 12.18 |
| triangular_3010_10310_negDiag.mps.mat: | 0.44 | 2.79 | 1.19 | 14.81 |
| triangular_3010_10310_posDiag.mps.mat: | 0.42 | $\frac{2.19}{2.45}$ | 3.78 | 59.34 |
| triangular_3010_10_001_mixDiag.mps.mat: | 0.30 | 5.01 | 1.67 | 8.08 |
| triangular_3010_10_0_01_negDiag.mps.mat: | 0.34 | 3.16 | 1.52 | 11.40 |
| triangular_3010_10_0_01_posDiag.mps.mat: | 0.54 | 2.92 | 6.05 | 35.13 |
| triangular_3010_10_002_mixDiag.mps.mat: | 0.38 | 2.94 | 3.59 | 34.79 |
| triangular_3010_10_002_negDiag.mps.mat: | 0.30 | 6.57 | 2.08 | 6.47 |
| triangular_3010_10_002_posDiag.mps.mat: | 0.60 | 5.11 | 5.00 | 73.89 |
| triangular_3010_10_003_mixDiag.mps.mat: | 0.36 | 2.89 | 1.43 | 85.06 |
| triangular_3010_10_003_negDiag.mps.mat: | 0.45 | 2.90 | 1.27 | 6.46 |
| triangular_3010_10_003_posDiag.mps.mat: | 0.46 | 2.83 | 2.63 | 61.74 |
| triangular_3010_10_004_mixDiag.mps.mat: | 0.45 | 2.85 | 1.70 | 23.77 |
| triangular_3010_10_0_04_negDiag.mps.mat: | 0.57 | 5.09 | 2.22 | 29.53 |
| triangular_3010_10_0_04_posDiag.mps.mat: | 0.64 | 4.53 | 6.23 | 204.78 |
| triangular_3010_10_005_mixDiag.mps.mat: | 0.37 | 2.98 | 1.03 | 8.76 |
| triangular_3010_10_005_negDiag.mps.mat: | 0.33 | 3.04 | 0.73 | 6.96 |
| triangular_3010_10_0_05_posDiag.mps.mat: | 0.32 | 2.91 | 1.82 | 17.29 |
| triangular_3010_10_0_06_mixDiag.mps.mat: | 0.39 | 4.59 | 2.57 | 32.38 |
| triangular_3010_10_0_06_negDiag.mps.mat: | 0.33 | 3.01 | 0.86 | 6.56 |
| triangular_3010_10_0_06_posDiag.mps.mat: | 0.54 | 3.05 | 3.01 | 55.57 |
| triangular_3010_10_007_mixDiag.mps.mat: | 0.30 | 2.94 | 1.89 | 36.27 |
| triangular_3010_10_0_07_negDiag.mps.mat: | 0.39 | 3.08 | 1.38 | 18.07 |
| triangular_3010_10_0_07_posDiag.mps.mat: | 0.59 | 4.96 | 4.33 | 90.24 |
| triangular_3010_10_0_08_mixDiag.mps.mat: | 0.33 | 2.88 | 2.21 | 42.01 |
| triangular_3010_10_0_08_negDiag.mps.mat: | 0.31 | 2.95 | 1.55 | 10.15 |
| $triangular_30\10_10_0__08_posDiag.mps.mat:$ | 0.39 | 2.94 | 4.05 | 58.87 |

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| KQP instance quadprogIP quadprogIP QUADPOREDIS CRAIN triangular.30-10.10.0_09.mcpDiag.mps.mat: 0.33 2.65 1.04 16.60 triangular.30-10.10.0_09.posDiag.mps.mat: 0.41 2.99 4.52 52.54 triangular.30-10.10.0_10.mixDiag.mps.mat: 0.51 2.70 1.99 22.92 triangular.30-10.10.0_10.nopDiag.mps.mat: 0.41 2.36 1.97 22.39 triangular.30-10.10.3_01.nogDiag.mps.mat: 0.31 4.92 1.11 12.56 triangular.30-10.10.3_01.nogDiag.mps.mat: 0.30 5.79 1.21 8.75 triangular.30-10.10.3_01.posDiag.mps.mat: 0.32 2.82 1.91 28.34 triangular.30-10.10.3_02.nogDiag.mps.mat: 0.03 2.75 1.67 3.56 triangular.30-10.10.3_03.nogDiag.mps.mat: 0.03 2.75 1.67 3.58 triangular.30-10.10.3_03.posDiag.mps.mat: 0.07 2.51 1.67 3.56 triangular.30-10.10.3_04.posDiag.mps.mat: 0.31 2.80 4.32 triangular.30-10.10.3_05.mixDiag.mps.mat: < | | Solution Time (s) | | | |
|--|--|-------------------|------------|-------|-------|
| triangular.3010.10.0_9.negDiag.mps.mat: 0.41 2.99 4.52 52.54 triangular.3010.10.0_9.pesDiag.mps.mat: 0.51 2.70 1.99 2.292 triangular.3010.10.0_10.mixDiag.mps.mat: 0.55 2.71 1.18 10.22 triangular.3010.10.0_10.posDiag.mps.mat: 0.35 2.71 1.18 10.22 triangular.3010.10.0_10.posDiag.mps.mat: 0.31 4.92 1.11 12.56 1.20 1.10 1.1 | SQP instance | quadprogIP | quadprogBB | CPLEX | BARON |
| triangular-30-10.10.0_09.posDiag.mps.mat: 0.51 2.70 1.99 22.92 triangular-30-10.10.0_10.mixDiag.mps.mat: 0.51 2.70 1.99 22.92 triangular-30-10.10.0_10.posDiag.mps.mat: 0.41 2.36 1.97 22.39 triangular-30-10.10.0_10.posDiag.mps.mat: 0.41 2.36 1.97 22.39 triangular-30-10.10.3_01.mixDiag.mps.mat: 0.31 4.92 1.11 12.56 triangular-30-10.10.3_01.mixDiag.mps.mat: 0.32 2.82 1.91 28.34 triangular-30-10.10.3_01.posDiag.mps.mat: 0.32 2.82 1.91 28.34 triangular-30-10.10.3_02.mixDiag.mps.mat: 0.32 2.84 0.89 3.38 triangular-30-10.10.3_02.posDiag.mps.mat: 0.29 2.84 0.89 3.38 triangular-30-10.10.3_02.posDiag.mps.mat: 0.29 2.84 0.89 3.38 triangular-30-10.10.3_02.posDiag.mps.mat: 0.37 2.75 1.67 37.86 triangular-30-10.10.3_03.mixDiag.mps.mat: 0.31 4.70 2.98 44.81 triangular-30-10.10.3_03.mixDiag.mps.mat: 0.67 5.13 0.80 5.30 triangular-30-10.10.3_03.mixDiag.mps.mat: 0.67 5.13 0.80 5.30 triangular-30-10.10.3_04.posDiag.mps.mat: 0.31 2.81 3.53 82.92 triangular-30-10.10.3_04.posDiag.mps.mat: 0.31 2.81 3.53 82.92 triangular-30-10.10.3_04.posDiag.mps.mat: 0.31 2.80 1.39 9.91 triangular-30-10.10.3_04.posDiag.mps.mat: 0.33 2.84 1.40 8.04 triangular-30-10.10.3_04.posDiag.mps.mat: 0.43 2.64 1.15 16.87 triangular-30-10.10.3_04.posDiag.mps.mat: 0.43 2.64 1.15 16.87 triangular-30-10.10.3_04.posDiag.mps.mat: 0.43 2.64 1.15 16.87 triangular-30-10.10.3_06.posDiag.mps.mat: 0.43 2.47 3.02 31.00 triangular-30-10.10.3_06.posDiag.mps.mat: 0.43 2.47 3.02 31.00 triangular-30-10.10.3_06.posDiag.mps.mat: 0.43 2.47 3.02 31.00 triangular-30-10.10.3_07.posDiag.mps.mat: 0.43 2.80 0.72 4.32 triangular-30-10.10.3_07.posDiag.mps.mat: 0.43 2.80 0.72 4.32 triangular-30-10.10.3_08.posDiag.mps.mat: 0.43 2.80 0.72 4.32 triangular-30-10.10.3_09.mixDiag.mps.mat: 0.43 2.80 0.72 4.32 1.10 3.55 triangular-30-10.10.3_09.mixDiag.mps.mat: 0.43 2.68 1.02 6.68 triangular-30-10.10.3_09.mixDiag.mps.mat: 0.43 2.68 1.02 6.68 triangular-30-10.10.3_09.mixDiag.mps.mat: 0.43 2.68 1.77 0.99 3.12 triangular-30-10.10.3_09.mixDiag.mps.mat: 0.44 2.74 1.18 13.15 triangular-30-10.10.3_09.mixD | triangular_3010_10_0_09_mixDiag.mps.mat: | 0.33 | 2.65 | 1.04 | 16.60 |
| triangular-30-10.10.010.mixDiag.mps.mat: 0.51 2.70 1.99 22.92 triangular-30-10.10.010.posDiag.mps.mat: 0.35 2.71 1.18 10.22 triangular-30-10.10.010.posDiag.mps.mat: 0.41 2.36 1.97 22.32 triangular-30-10.10.310.mixDiag.mps.mat: 0.31 4.92 1.11 12.56 triangular-30-10.10.301.posDiag.mps.mat: 0.32 2.82 1.91 2.834 triangular-30-10.10.302.posDiag.mps.mat: 0.33 2.78 1.58 55.10 triangular-30-10.10.302.posDiag.mps.mat: 0.37 2.75 1.67 37.86 triangular-30-10.10.303.mixDiag.mps.mat: 0.37 2.75 1.67 37.86 triangular-30-10.10.303.posDiag.mps.mat: 0.31 2.81 3.53 82.29 triangular-30-10.10.304.megDiag.mps.mat: 0.31 2.81 3.53 82.29 triangular-30-10.10.304.posDiag.mps.mat: 0.33 2.84 1.40 8.04 triangular-30-10.10.305.megDiag.mps.mat: 0.43 2.64 1.15 1.68 triangula | $triangular_30\10_10_0__09_negDiag.mps.mat:$ | 0.37 | 2.77 | 1.05 | |
| triangular-30-10.10.0_10.negDiag.mps.mat: 0.35 | $triangular_30\10_10_0__09_posDiag.mps.mat:$ | 0.41 | 2.99 | 4.52 | |
| triangular 30-10.10.0_10_posDiag.mps.mat: 0.31 4.92 1.171 12.56 triangular 30-10.10.3_01_mixDiag.mps.mat: 0.30 4.92 1.171 12.56 triangular 30-10.10.3_01_mixDiag.mps.mat: 0.30 5.79 1.21 8.75 triangular 30-10.10.3_01_mixDiag.mps.mat: 0.32 2.82 1.91 28.34 triangular 30-10.10.3_02_mixDiag.mps.mat: 0.32 2.82 1.91 28.34 triangular 30-10.10.3_02_mixDiag.mps.mat: 0.29 2.84 0.89 3.38 triangular 30-10.10.3_02_posDiag.mps.mat: 0.37 2.75 1.67 37.86 triangular 30-10.10.3_03_mixDiag.mps.mat: 0.37 2.75 1.67 37.86 triangular 30-10.10.3_03_mixDiag.mps.mat: 0.31 4.70 2.98 44.81 triangular 30-10.10.3_03_mixDiag.mps.mat: 0.31 4.70 2.98 44.81 triangular 30-10.10.3_03_mixDiag.mps.mat: 0.31 2.81 3.53 82.29 1.110.10.3_01.01.03_04_mixDiag.mps.mat: 0.31 2.81 3.53 82.29 1.110.10.3_01.01.03_04_mixDiag.mps.mat: 0.50 4.87 0.79 3.56 1.110.10.3_01.01.03_04_mixDiag.mps.mat: 0.50 4.87 0.79 3.56 1.110.10.3_01.01.03_04_posDiag.mps.mat: 0.50 4.87 0.79 3.56 1.110.10.3_01.01.03_04_posDiag.mps.mat: 0.33 2.72 0.92 13.30 1.110.10.3_05_mixDiag.mps.mat: 0.43 2.64 1.15 16.87 1.110.10.3_01.01.01.3_05_mixDiag.mps.mat: 0.43 2.64 1.15 16.87 1.110.10.3_01.01.01.3_05_posDiag.mps.mat: 0.43 2.64 1.15 16.87 1.110.10.3_01.01.01.03_06_mixDiag.mps.mat: 0.43 2.47 3.02 31.00 1.110.3_01.01.01.03_06_mixDiag.mps.mat: 0.43 2.47 3.02 31.00 1.110.3_01.01.01.03_06_mixDiag.mps.mat: 0.43 2.47 3.02 31.00 1.110.3_01.01.01.03_06_mixDiag.mps.mat: 0.43 2.48 0.72 4.32 1.110.10.3_01.01.03_06_mixDiag.mps.mat: 0.43 2.68 1.02 6.89 1.110 1.111 1.1 | | | | 1.99 | |
| triangular 3010.10.301.mixDiag mps.mat: 0.31 4.92 1.11 12.56 triangular 3010.10.301.posDiag.mps.mat: 0.32 2.82 1.91 28.34 triangular 3010.10.301.posDiag.mps.mat: 0.32 2.82 1.91 28.34 triangular 3010.10.302.mixDiag.mps.mat: 0.32 2.84 0.89 3.38 triangular 3010.10.302.posDiag.mps.mat: 0.37 2.75 1.67 37.86 triangular 3010.10.302.posDiag.mps.mat: 0.37 2.75 1.67 37.86 triangular 3010.10.302.posDiag.mps.mat: 0.31 4.70 2.98 44.81 triangular 3010.10.303.posDiag.mps.mat: 0.31 4.70 2.98 44.81 1.30 3.30 1.30.10.10.303.posDiag.mps.mat: 0.31 4.70 2.98 44.81 1.30 4.70 2.98 44.81 1.30 4.70 2.98 44.81 1.30 4.70 2.98 44.81 1.30 4.70 2.98 44.81 1.30 4.70 2.98 44.81 1.30 4.70 2.70 2.70 2.70 2.70 2.70 2.70 2.70 2 | | | | | |
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| triangular 30-10.10.3_05 mixDiag.mps.mat: 0.43 2.64 1.15 16.87 triangular 30-10.10.3_05.pegDiag.mps.mat: 0.33 2.72 0.92 13.30 triangular 30-10.10.3_05.posDiag.mps.mat: 0.43 2.47 3.02 31.00 triangular 30-10.10.3_06.mixDiag.mps.mat: 0.50 2.85 1.24 4.72 triangular 30-10.10.3_06.negDiag.mps.mat: 0.43 2.80 0.72 4.32 triangular 30-10.10.3_06.posDiag.mps.mat: 0.41 2.75 1.40 33.55 triangular 30-10.10.3_07.mixDiag.mps.mat: 0.41 2.75 1.40 33.55 triangular 30-10.10.3_07.posDiag.mps.mat: 0.41 4.71 0.81 4.65 triangular 30-10.10.3_07.posDiag.mps.mat: 0.32 3.03 1.95 17.66 triangular 30-10.10.3_08.posDiag.mps.mat: 0.32 3.03 1.95 17.66 triangular_30-10.10.3_09.posDiag.mps.mat: 0.32 3.03 1.95 17.56 triangular_30-10.10.3_09.posDiag.mps.mat: 0.32 4.92 1.27 5.59 triangular_30-10.10.3_1 | | | | | |
| triangular 30-10.10.3_05_negDiag_mps.mat: 0.33 2.72 0.92 13.30 triangular 30-10.10.3_05_posDiag_mps.mat: 0.43 2.47 3.02 31.00 triangular 30-10.10.3_06_mixDiag_mps.mat: 0.50 2.85 1.24 4.72 triangular 30-10.10.3_06_negDiag_mps.mat: 0.43 2.80 0.72 4.32 triangular 30-10.10.3_06_posDiag_mps.mat: 0.41 2.75 1.40 33.55 triangular 30-10.10.3_07_mixDiag_mps.mat: 0.41 4.71 0.81 4.65 triangular 30-10.10.3_07_posDiag_mps.mat: 0.41 4.71 0.81 4.65 triangular 30-10.10.3_08_posDiag_mps.mat: 0.37 4.72 0.90 3.12 triangular 30-10.10.3_08_posDiag_mps.mat: 0.32 3.03 1.95 17.66 triangular 30-10.10.3_0_9_posDiag_mps.mat: 0.38 2.96 1.10 5.14 triangular_30-10.10.3_0_9_posDiag_mps.mat: 0.34 2.74 1.18 13.15 triangular_30-10.10.3_0_9_posDiag_mps.mat: 0.32 4.92 1.27 5.59 triangular_30-10.10.3_1 | | | | | |
| triangular_3010_10_306_mixDiag_mps_mat: 0.43 | | | | | |
| triangular_3010_10_306_mixDiag_mps.mat: 0.50 | | | | | |
| triangular_3010_10_306_negDiag_mps.mat: 0.43 2.80 0.72 4.32 triangular_3010_10_306_posDiag_mps.mat: 0.41 2.75 1.40 33.55 triangular_3010_10_307_mixDiag_mps.mat: 0.43 2.68 1.02 6.89 triangular_3010_10_307_posDiag_mps.mat: 0.41 4.71 0.81 4.65 triangular_3010_10_307_posDiag_mps.mat: 0.37 4.72 0.90 3.12 triangular_3010_10_308_mixDiag_mps.mat: 0.32 3.03 1.95 17.66 triangular_3010_10_308_posDiag_mps.mat: 0.38 2.96 1.10 5.14 triangular_3010_10_309_posDiag_mps.mat: 0.55 2.86 1.18 13.15 triangular_3010_10_309_posDiag_mps.mat: 0.32 4.92 1.27 5.59 triangular_3010_10_309_posDiag_mps.mat: 0.36 2.70 1.49 42.94 triangular_3010_10_301_0mixDiag_mps.mat: 0.47 3.01 0.93 4.71 triangular_3010_10_310_negDiag_mps.mat: 0.47 3.01 0.93 4.71 tr | | | | | |
| triangular_3010_10_3_07_mixDiag_mps_mat: 0.43 2.68 1.02 6.89 triangular_3010_10_3_07_negDiag_mps_mat: 0.41 4.71 0.81 4.65 triangular_3010_10_3_07_posDiag_mps_mat: 0.37 4.72 0.90 3.12 triangular_3010_10_3_08_mixDiag_mps_mat: 0.32 3.03 1.95 17.66 triangular_3010_10_3_08_negDiag_mps.mat: 0.38 2.96 1.10 5.14 triangular_3010_10_3_08_posDiag_mps.mat: 0.55 2.86 1.88 28.94 triangular_3010_10_3_09_megDiag_mps.mat: 0.34 2.74 1.18 13.15 triangular_3010_10_3_09_negDiag_mps.mat: 0.32 4.92 1.27 5.59 triangular_3010_10_3_0_negDiag_mps.mat: 0.36 2.70 1.49 42.94 triangular_3010_10_3_10_negDiag_mps.mat: 0.47 2.93 1.12 19.59 triangular_3010_10_3_10_negDiag_mps.mat: 0.47 3.01 0.93 4.71 triangular_3010_10_3_10_negDiag_mps.mat: 0.24 6.83 1.77 0.99 triangular_30 | | | | 0.72 | 4.32 |
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| triangular_3010_10_307_posDiag.mps.mat: 0.37 4.72 0.90 3.12 triangular_3010_10_308_mixDiag.mps.mat: 0.32 3.03 1.95 17.66 triangular_3010_10_308_negDiag.mps.mat: 0.38 2.96 1.10 5.14 triangular_3010_10_308_posDiag.mps.mat: 0.55 2.86 1.88 28.94 triangular_3010_10_309_mixDiag.mps.mat: 0.34 2.74 1.18 13.15 triangular_3010_10_309_negDiag.mps.mat: 0.32 4.92 1.27 5.59 triangular_3010_10_309_posDiag.mps.mat: 0.36 2.70 1.49 42.94 triangular_3010_10_310_mixDiag.mps.mat: 0.47 2.93 1.12 19.59 triangular_3010_10_310_negDiag.mps.mat: 0.47 3.01 0.93 4.71 triangular_3010_10_310_posDiag.mps.mat: 0.28 2.95 1.75 52.65 triangular_3010_501_negDiag.mps.mat: 0.24 6.83 1.77 0.09 triangular_30_0_10_502_negDiag.mps.mat: 0.24 42.28 0.22 0.10 trian | triangular_3010_10_307_mixDiag.mps.mat: | 0.43 | 2.68 | 1.02 | 6.89 |
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| triangular_3010_10_310_negDiag.mps.mat: 0.47 3.01 0.93 4.71 triangular_3010_10_310_posDiag.mps.mat: 0.28 2.95 1.75 52.65 triangular_30_0_10_501_mixDiag.mps.mat: 0.24 6.83 1.77 0.09 triangular_30_0_10_501_negDiag.mps.mat: 0.24 42.28 0.22 0.10 triangular_30_0_10_501_posDiag.mps.mat: 0.23 4.77 1.49 0.09 triangular_30_0_10_502_mixDiag.mps.mat: 0.40 5.12 9.42 0.31 triangular_30_0_10_502_negDiag.mps.mat: 0.23 24.05 0.29 0.12 triangular_30_0_10_502_posDiag.mps.mat: 0.48 5.06 9.35 0.31 triangular_30_0_10_503_mixDiag.mps.mat: 0.24 5.13 1.50 0.08 triangular_30_0_10_503_negDiag.mps.mat: 0.23 59.95 0.25 0.11 triangular_30_0_10_504_mixDiag.mps.mat: 0.25 5.13 1.41 0.08 triangular_30_0_10_504_negDiag.mps.mat: 0.24 92.20 0.26 0.12 triangular_30_0_10_504_posDiag.mps.mat: 0.32 15.32 4.68 0.20 </td <td></td> <td></td> <td></td> <td></td> <td></td> | | | | | |
| triangular_3010_10_310_posDiag.mps.mat: 0.28 2.95 1.75 52.65 triangular_30_0_10_501_mixDiag.mps.mat: 0.24 6.83 1.77 0.09 triangular_30_0_10_501_negDiag.mps.mat: 0.24 42.28 0.22 0.10 triangular_30_0_10_501_posDiag.mps.mat: 0.23 4.77 1.49 0.09 triangular_30_0_10_502_mixDiag.mps.mat: 0.40 5.12 9.42 0.31 triangular_30_0_10_502_negDiag.mps.mat: 0.23 24.05 0.29 0.12 triangular_30_0_10_502_posDiag.mps.mat: 0.48 5.06 9.35 0.31 triangular_30_0_10_503_negDiag.mps.mat: 0.24 5.13 1.50 0.08 triangular_30_0_10_503_negDiag.mps.mat: 0.23 59.95 0.25 0.11 triangular_30_0_10_503_posDiag.mps.mat: 0.25 5.13 1.41 0.08 triangular_30_0_10_504_negDiag.mps.mat: 0.25 5.13 1.41 0.08 triangular_30_0_10_504_negDiag.mps.mat: 0.24 92.20 0.26 0.12 triangular_30_0_10_504 | | | | | |
| triangular_30_0_10_5_01_mixDiag.mps.mat: 0.24 6.83 1.77 0.09 triangular_30_0_10_5_01_negDiag.mps.mat: 0.24 42.28 0.22 0.10 triangular_30_0_10_5_01_posDiag.mps.mat: 0.23 4.77 1.49 0.09 triangular_30_0_10_5_02_mixDiag.mps.mat: 0.40 5.12 9.42 0.31 triangular_30_0_10_5_02_negDiag.mps.mat: 0.23 24.05 0.29 0.12 triangular_30_0_10_5_02_posDiag.mps.mat: 0.48 5.06 9.35 0.31 triangular_30_0_10_5_03_mixDiag.mps.mat: 0.24 5.13 1.50 0.08 triangular_30_0_10_5_03_negDiag.mps.mat: 0.23 59.95 0.25 0.11 triangular_30_0_10_5_03_posDiag.mps.mat: 0.25 5.13 1.41 0.08 triangular_30_0_10_5_04_mixDiag.mps.mat: 0.40 15.02 4.45 0.19 triangular_30_0_10_5_04_negDiag.mps.mat: 0.24 92.20 0.26 0.12 triangular_30_0_10_5_05_mixDiag.mps.mat: 0.37 9.70 4.88 0.54 triangular_30_0_10_5_05_nosDiag.mps.mat: 0.42 9.71 5.09 0.53 | 0 0 1 | | | | |
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| triangular_30_0_10_5_06_negDiag.mps.mat: 0.24 44.77 0.32 0.10 triangular_30_0_10_5_06_posDiag.mps.mat: 0.29 9.22 19.92 0.54 | | | | | |
| triangular_30_0_10_5_06_posDiag.mps.mat: 0.29 9.22 19.92 0.54 | | | | | |
| 1 1 2 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | | 9.22 | | |
| triangular_30_0_10_5_0/_mixDiag.mps.mat: 0.48 5.06 1.66 0.26 | $triangular_30_0_10_5__07_mixDiag.mps.mat:$ | 0.48 | 5.06 | 1.66 | 0.26 |

... continued.

| SQP instance quadprogIP quadprogBB CPLEX BARNO triangular 30.0.10.5.07.negDiag.mps.mat: triangular 30.0.10.5.07.posDiag.mps.mat: triangular 30.0.10.5.08.mixDiag.mps.mat: triangular 30.0.10.5.08.mixDiag.mps.mat: 0.24 4.18.3 0.15 0.30 triangular 30.0.10.5.0.8.negDiag.mps.mat: triangular 30.0.10.5.09.mixDiag.mps.mat: 0.23 5.38 0.49 0.00 triangular 30.0.10.5.0.9.posDiag.mps.mat: 1.023 5.38 0.49 0.09 triangular 30.0.10.5.0.0 posDiag.mps.mat: 1.023 5.38 0.49 0.09 triangular 30.0.10.5.0.0 posDiag.mps.mat: 1.023 7.17 1.07 0.11 triangular 30.0.10.5.0.0 posDiag.mps.mat: 1.023 45.21 0.25 0.08 triangular 30.0.10.5.0.0 mixDiag.mps.mat: 1.031 4.96 3.89 0.10 1.10 1.11 triangular 30.0.10.5.10 posDiag.mps.mat: 1.03 4.97 3.80 0.19 1.11 1.11 1.12 <t< th=""><th></th><th colspan="3">Solution Time (s)</th><th></th></t<> | | Solution Time (s) | | | |
|---|--|-------------------|------------|---------|-------|
| triangular.30.0.10.5.07.posDiag.mps.mat: 0.38 12.25 4.39 0.30 ciriangular.30.0.10.5.08.msDiag.mps.mat: 0.24 41.83 0.15 0.10 triangular.30.0.10.5.08.posDiag.mps.mat: 0.24 41.83 0.15 0.10 triangular.30.0.10.5.09.posDiag.mps.mat: 0.23 71.71 0.17 0.11 triangular.30.0.10.5.09.posDiag.mps.mat: 0.23 71.71 0.17 0.11 triangular.30.0.10.5.09.posDiag.mps.mat: 0.23 71.71 0.17 0.11 triangular.30.0.10.5.09.posDiag.mps.mat: 0.22 5.39 0.42 0.10 triangular.30.0.10.5.10.mixDiag.mps.mat: 0.23 45.21 0.25 0.08 triangular.30.0.10.5.10.posDiag.mps.mat: 0.23 45.21 0.25 0.08 triangular.30.0.10.5.10.posDiag.mps.mat: 0.31 4.96 3.89 0.19 triangular.30.0.10.5.10.posDiag.mps.mat: 0.36 4.97 3.80 0.19 triangular.50.10.0.5.01.posDiag.mps.mat: 0.36 4.97 3.80 0.19 triangular.50.10.0.5.01.mixDiag.mps.mat: 0.36 4.97 3.80 0.19 triangular.50.10.0.5.01.mixDiag.mps.mat: 0.36 4.97 3.80 0.19 triangular.50.10.0.5.01.posDiag.mps.mat: 0.83 19.69 5559.78 triangular.50.10.0.5.02.mixDiag.mps.mat: 0.67 18.65 2134.43 - triangular.50.10.0.5.02.mixDiag.mps.mat: 0.67 18.65 2134.43 - triangular.50.10.0.5.02.mixDiag.mps.mat: 0.68 20.77 2154.58 - triangular.50.10.0.5.03.mspDiag.mps.mat: 0.68 20.77 2154.58 triangular.50.10.0.5.03.mspDiag.mps.mat: 0.68 20.77 2154.58 triangular.50.10.0.5.03.mspDiag.mps.mat: 0.96 19.68 426.59 triangular.50.10.0.5.03.mspDiag.mps.mat: 0.96 19.68 426.59 triangular.50.10.0.5.03.mspDiag.mps.mat: 0.96 19.68 426.59 triangular.50.10.0.5.04.mixDiag.mps.mat: 0.96 19.68 426.59 triangular.50.10.0.5.04.mixDiag.mps.mat: 0.96 19.68 426.59 triangular.50.10.0.5.05.mspDiag.mps.mat: 0.97 19.68 426.59 triangular.50.10.0.5.05.mspDiag.mps.mat: 0.98 19.68 421.96 19.68 426.59 triangular.50.10.0.5.05.mspDiag.mps.mat: 0.98 19.68 425.19 250.86 19.68 425.10 250.85 19.69 | SQP instance | quadprogIP | quadprogBB | CPLEX | BARON |
| triangular 30.0.10.5.08.mixDiag.mps.mat: 0.30 12.25 4.39 0.30 triangular 30.0.10.5.08.posDiag.mps.mat: 0.24 41.83 0.15 0.10 triangular 30.0.10.5.09.mixDiag.mps.mat: 0.23 5.38 0.49 0.09 triangular 30.0.10.5.09.mps.pms.mat: 0.23 5.38 0.49 0.09 triangular 30.0.10.5.09.posDiag.mps.mat: 0.23 7.71 0.17 0.11 triangular 30.0.10.5.10.mgbiag.mps.mat: 0.31 4.96 3.89 0.19 triangular 30.0.10.5.10.posDiag.mps.mat: 0.36 4.97 3.80 0.19 triangular 30.0.10.5.10.posDiag.mps.mat: 0.36 4.97 3.80 0.19 triangular 50.10.0.5.01.mixDiag.mps.mat: 0.63 16.68 5561.64 1 triangular 50.10.0.5.02.mpg.piag.mps.mat: 0.83 16.68 5561.64 1 triangular 50.10.0.5.02.mpg.piag.mps.mat: 0.68 20.77 2154.43 2 triangular 50.10.0.5.03.mixDiag.mps.mat: 0.96 19.64 426.59 2 triangular 50.10.0.5.03.mixDiag.mps.mat:< | | 0.23 | 37.49 | 0.13 | 0.10 |
| triangular 30.0.10.5.08.negDiag.mps.mat: 0.24 41.83 0.15 0.10 triangular 30.0.10.5.08.posDiag.mps.mat: 0.23 5.38 0.49 0.09 triangular 30.0.10.5.09.megDiag.mps.mat: 0.23 71.71 0.17 0.11 triangular 30.0.10.5.09.posDiag.mps.mat: 0.22 5.39 0.42 0.10 triangular 30.0.10.5.10.mixDiag.mps.mat: 0.23 45.21 0.25 0.08 triangular 30.0.10.5.10.posDiag.mps.mat: 0.36 4.97 3.80 0.19 triangular 50.10.0.5.01.mixDiag.mps.mat: 0.36 4.97 3.80 0.19 triangular 50.10.0.5.01.mixDiag.mps.mat: 0.68 4.97 3.80 0.19 triangular 50.10.0.5.02.poxDiag.mps.mat: 0.68 4.97 2154.58 -1 triangular 50.10.0.5.02.mixDiag.mps.mat: 0.68 20.77 2154.58 -1 triangular 50.10.0.5.03.mixDiag.mps.mat: 0.68 20.77 2154.58 -1 triangular 50.10.0.5.03.mixDiag.mps.mat: 0.96 19.64 426.59 -1 triangular 50.10.0.5.03.mox megDia | | 0.58 | 7.26 | 1.57 | 0.26 |
| triangular 30.0.10.5.08, posDiag mps.mat: 0.33 12.05 4.46 0.29 triangular 30.0.10.5.09 negbiag mps.mat: 0.23 71.71 0.11 0.11 triangular 30.0.10.5.09 posDiag mps.mat: 0.22 5.39 0.42 0.10 triangular 30.0.10.5.10 mixbiag mps.mat: 0.31 4.96 3.89 0.11 triangular 30.0.10.5.10 negDiag mps.mat: 0.36 4.97 3.80 0.19 triangular 30.0.10.5.10 negDiag mps.mat: 0.36 4.97 3.80 0.19 triangular 50.10.0.5.0.10 negDiag mps.mat: 0.83 16.68 5561.64 - triangular 50.10.0.5.0.10 negDiag mps.mat: 0.68 16.68 5561.64 - triangular 50.10.0.5.0.2 megDiag mps.mat: 0.68 20.77 2154.58 - triangular 50.10.0.5.0.3 mixDiag mps.mat: 0.68 20.77 2154.58 - triangular 50.10.0.5.0.3 mixDiag mps.mat: 0.96 19.64 426.59 - triangular 50.10.0.5.0.3 mixDiag mps.mat: 0.92 16.3 421.96 - triangular 50.10.0.5.0.40 mix | | | | | |
| triangular 30.0.10.5.09.mixDiag.mps.mat: 0.23 5.38 0.49 0.09 triangular 30.0.10.5.09.posDiag.mps.mat: 0.22 5.39 0.12 0.11 triangular 30.0.10.5.10.mixDiag.mps.mat: 0.31 4.96 3.89 0.19 triangular 30.0.10.5.10.nepDiag.mps.mat: 0.23 45.21 0.25 0.08 triangular 30.0.10.5.10.nepDiag.mps.mat: 0.23 45.21 0.25 0.08 triangular 50.10.0.5.01.mixDiag.mps.mat: 0.36 4.97 3.80 0.19 triangular 50.10.0.5.01.mixDiag.mps.mat: 0.68 4.97 3.80 0.10 triangular 50.10.0.5.01.mixDiag.mps.mat: 0.67 1.65 556.164 c-1 triangular 50.10.0.5.02.mixDiag.mps.mat: 0.67 1.65 2134.43 c-1 triangular 50.10.0.5.02.poxDiag.mps.mat: 0.68 20.77 2154.58 c-1 triangular 50.10.0.5.03.poxDiag.mps.mat: 0.68 20.77 2154.58 c-1 triangular 50.10.0.5.04.mgDiag.mps.mat: 0.92 16.38 421.96 c-1 triangular 50.10.0.5.05.mgDiag | | | | | |
| triangular 30.0.10.509.negDiag mps.mat: 0.23 71.71 0.17 0.11 triangular 30.0.10.509.posDiag.mps.mat: 0.31 4.96 3.89 0.19 triangular 30.0.10.510.mixDiag.mps.mat: 0.31 4.96 3.89 0.19 triangular 30.0.10.510.negDiag.mps.mat: 0.36 4.97 3.80 0.19 triangular 50.10.0.501.negDiag.mps.mat: 0.93 19.69 5559.78 - triangular 50.10.0.501.negDiag.mps.mat: 0.83 16.68 5561.64 - triangular 50.10.0.501.posDiag.mps.mat: 0.83 16.68 5561.64 - triangular 50.10.0.502.negDiag.mps.mat: 0.67 18.65 2134.43 - triangular 50.10.0.502.negDiag.mps.mat: 0.68 20.77 2154.88 - triangular 50.10.0.502.negDiag.mps.mat: 0.96 19.64 426.59 - triangular 50.10.0.503.negDiag.mps.mat: 0.91 19.64 426.59 - triangular 50.10.0.504.negDiag.mps.mat: 0.81 25.17 2505.85 - triangular 5 | | | | | |
| triangular 30.0.10.5_09.posDiag.mps.mat: 0.22 5.39 0.42 0.10 triangular 30.0.10.5_10 mixDiag.mps.mat: 0.31 4.96 3.89 0.19 triangular 30.0.10.5_10.negDiag.mps.mat: 0.23 45.21 0.25 0.08 triangular 30.0.10.5_10.negDiag.mps.mat: 0.36 4.97 3.80 0.19 triangular 50-10.0-5_01.mixDiag.mps.mat: 0.93 19.69 5559.78 1 triangular 50-10.0-5_01.mixDiag.mps.mat: 0.83 16.68 5561.64 - 1 triangular 50-10.0-5_01.negDiag.mps.mat: 0.83 16.68 5561.64 - 1 triangular 50-10.0-5_01.negDiag.mps.mat: 0.67 18.65 2134.43 - 1 triangular 50-10.0-5_02.mixDiag.mps.mat: 0.67 18.65 2134.43 - 1 triangular 50-10.0-5_02.mixDiag.mps.mat: 0.68 20.77 2154.58 1 triangular 50-10.0-5_02.mixDiag.mps.mat: 0.68 20.77 2154.58 1 triangular 50-10.0-5_02.negDiag.mps.mat: 0.68 20.77 2154.58 1 triangular 50-10.0-5_03.mixDiag.mps.mat: 0.96 19.64 426.59 - 1 triangular 50-10.0-5_03.mixDiag.mps.mat: 0.92 16.38 421.96 1 triangular 50-10.0-5_03.megDiag.mps.mat: 0.92 16.38 421.96 1 triangular 50-10.0-5_03.negDiag.mps.mat: 0.92 16.38 421.96 1 triangular 50-10.0-5_04.mixDiag.mps.mat: 0.92 16.38 421.96 1 triangular 50-10.0-5_04.posDiag.mps.mat: 0.91 1 triangular 50-10.0-5_04.posDiag.mps.mat: 0.74 23.01 2505.86 1 triangular 50-10.0-5_05.mixDiag.mps.mat: 0.74 23.01 2505.86 1 triangular 50-10.0-5_05.negDiag.mps.mat: 0.78 15.30 8911.73 1 triangular 50-10.0-5_05.posDiag.mps.mat: 0.78 15.30 8911.73 1 triangular 50-10.0-5_05.posDiag.mps.mat: 0.78 15.30 8911.73 1 triangular 50-10.0-5_06.negDiag.mps.mat: 0.78 15.30 8911.73 1 triangular 50-10.0-5_06.negDiag.mps.mat: 0.78 15.30 8911.73 1 triangular 50-10.0-5_08.posDiag.mps.mat: 0.78 15.66 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | | | | |
| triangular 30.0.10.510.mixDiag.mps.mat: 0.31 4.96 3.89 0.19 triangular 30.0.10.510.posDiag.mps.mat: 0.23 45.21 0.25 0.08 triangular 30.0.10.510.posDiag.mps.mat: 0.36 4.97 3.80 0.19 triangular .5010.0501.mixDiag.mps.mat: 0.93 19.69 5559.78 1.00.10 1.00.10.0.501.megDiag.mps.mat: 0.83 19.69 5559.78 1.00.10.0.501.posDiag.mps.mat: 0.83 19.69 5559.78 1.00.10.0.501.posDiag.mps.mat: 0.83 19.69 5559.78 1.00.10.0.501.posDiag.mps.mat: 0.83 19.69 5559.78 1.00.10.0.501.posDiag.mps.mat: 0.67 18.65 2134.43 1.00.10.10.10.0.502.mixDiag.mps.mat: 0.67 18.65 2134.43 1.00.10.10.10.0.502.mixDiag.mps.mat: 0.67 18.65 2134.43 1.00.10.10.10.0.502.posDiag.mps.mat: 0.68 10.0.502.posDiag.mps.mat: 0.68 19.64 426.59 1.00.10.10.502.posDiag.mps.mat: 0.96 19.64 426.59 1.00.10.10.503.mixDiag.mps.mat: 0.96 19.64 426.59 1.00.10.10.503.mixDiag.mps.mat: 0.96 19.64 426.59 1.00.10.10.503.mixDiag.mps.mat: 0.90 11.00.5 1.00.503.mixDiag.mps.mat: 0.90 11.00.5 1.00.503.mixDiag.mps.mat: 0.90 11.00.5 1.00.504.mixDiag.mps.mat: 0.81 25.17 2505.85 1.00.10.10.504.mixDiag.mps.mat: 0.81 25.17 2505.85 1.00.10.10.504.mixDiag.mps.mat: 0.81 25.17 2505.85 1.00.10.10.504.mixDiag.mps.mat: 0.81 15.30 891.73 8860.88 1.73 8860.88 1.73 8860.88 1.73 8860.88 1.73 8860.88 1.73 8860.88 1.73 8860.88 1.73 1.00.505.posDiag.mps.mat: 0.78 15.30 891.73 1.00.10.505.mixDiag.mps.mat: 0.78 15.30 891.73 1.00.10.505.mixDiag.mps.mat: 0.78 15.30 891.73 1.00.10.505.mixDiag.mps.mat: 0.78 15.30 891.73 1.00.10.506.mixDiag.mps.mat: 0.75 19.10 4116.75 1.00.10.501.00.507.posDiag.mps.mat: 0.72 15.65 199.19 1.11.10.10.10.10.507.nixDiag.mps.mat: 0.72 15.65 199.19 1.11.10.10.10.10.507.posDiag.mps.mat: 0.72 15.65 199.19 1.11.10.10.10.10.507.posDiag.mps.mat: 0.72 15.65 199.19 1.11.10.10.10.10.507.posDiag.mps.mat: 0.75 19.10.10.507.posDiag.mps.mat: 0.75 19.10.10.507.posDiag.mps.mat: 0.75 19.10.10.10.507.posDiag.mps.mat: 0.75 19.10.10.10.507.posDiag.mps.mat: 0.75 19.10.10.10.507.posDiag.mps.mat: 0.75 19.10.10.10.10.10.10.10.10 | | | | | |
| triangular_30_0_10_510_posDiag_mps.mat: 0.23 | | | | | |
| triangular 30.0.10.510.posDiag.mps.mat: 0.36 4.97 3.80 0.19 triangular 5010.0501.mgDiag.mps.mat: 0.83 19.69 5559.78 - triangular 5010.0501.posDiag.mps.mat: 0.83 16.68 5561.64 - triangular 5010.0502.mixDiag.mps.mat: 4.18 117.31 - - triangular 5010.0502.posDiag.mps.mat: 0.68 20.77 2154.58 - triangular 5010.0502.posDiag.mps.mat: 4.11 14.45 - - triangular 5010.0503.mixDiag.mps.mat: 0.96 19.64 426.59 - triangular 5010.0503.mixDiag.mps.mat: 0.92 16.38 421.96 - triangular 5010.0504.mixDiag.mps.mat: 0.81 25.17 2505.85 - triangular 5010.0504.mixDiag.mps.mat: 0.74 23.01 2505.86 - triangular 5010.0505.mixDiag.mps.mat: 0.74 23.01 2505.86 - triangular 5010.0505.mixDiag.mps.mat: 0.78 15.30 8911.73 - triangular 5 | | | | | |
| triangular_5010_05_01_mixDiag_mps_mat: triangular_5010_05_01_negDiag_mps_mat: triangular_5010_05_01_negDiag_mps_mat: triangular_5010_05_01_negDiag_mps_mat: triangular_5010_05_01_negDiag_mps_mat: triangular_5010_05_02_negDiag_mps_mat: triangular_5010_05_02_negDiag_mps_mat: triangular_5010_05_02_negDiag_mps_mat: triangular_5010_05_02_negDiag_mps_mat: triangular_5010_05_02_negDiag_mps_mat: triangular_5010_05_03_negDiag_mps_mat: triangular_5010_05_03_negDiag_mps_mat: triangular_5010_05_03_negDiag_mps_mat: triangular_5010_05_03_negDiag_mps_mat: triangular_5010_05_03_negDiag_mps_mat: triangular_5010_05_04_negDiag_mps_mat: triangular_5010_05_04_negDiag_mps_mat: triangular_5010_05_04_negDiag_mps_mat: triangular_5010_05_04_negDiag_mps_mat: triangular_5010_05_05_negDiag_mps_mat: triangular_5010_05_05_negDiag_mps_mat: triangular_5010_05_05_negDiag_mps_mat: triangular_5010_05_05_negDiag_mps_mat: triangular_5010_05_06_negDiag_mps_mat: triangular_5010_05_06_negDiag_mps_mat: triangular_5010_05_06_negDiag_mps_mat: triangular_5010_05_06_negDiag_mps_mat: triangular_5010_05_07_negDiag_mps_mat: triangular_5010_05_08_negDiag_mps_mat: triangular_5010_05_08_negDiag_mps_mat: triangular_5010_05_08_negDiag_mps_mat: triangular_5010_05_08_negDiag_mps_mat: triangular_5010_05_08_negDiag_mps_mat: triangular_5010_05_08_negDiag_mps_mat: triangular_5010_05_08_negDiag_mps_mat: triangular_5010_05_08_negDiag_mps_mat: triangular_5010_05_09_negDiag_mps_mat: triangular_5010_05_09_negDiag_mps_mat: triangular_5010_05_09_negDiag_mps_mat: triangular_5010_05_09_negDiag_mps_mat: triangular_5010_05_10_negDiag_mps_mat: triangular_5010_05_10_negDiag_mps_mat: triangular_5010_05_10_negDiag_mps_mat: triangular_5010_05_10_negDiag_mps_mat: triangular_5010_05_10_negDiag_mps_mat: triangular_5010_103_0_1_negDiag_mps_mat: triangular_5010_103_0_1_negDiag_mps_mat: triangular_5010_10_ | | | | | |
| triangular_50-10.0-5_01_negDiag_mps_mat: | | | | | 0.19 |
| triangular_50-10.0-5_01_posDiag_mps.mat: | | | | | - |
| triangular_5010_05_02_nixDiag_mps_mat: triangular_5010_05_02_negDiag_mps_mat: 4 | | | | 5501.04 | - |
| triangular_5010_0502_posDiag_mps.mat: | | | | 9194.49 | - |
| triangular_5010_0502_posDiag_mps_mat: triangular_5010_0503_nepDiag_mps_mat: 0.96 19.64 426.59 - triangular_5010_0503_nepDiag_mps_mat: 0.92 16.38 421.96 - triangular_5010_0503_posDiag_mps_mat: 0.92 16.38 421.96 - triangular_5010_0503_posDiag_mps_mat: 0.81 25.17 2505.85 - triangular_5010_0504_mixDiag_mps_mat: 0.81 25.17 2505.86 - triangular_5010_0504_posDiag_mps_mat: 0.81 25.17 2505.86 - triangular_5010_0504_posDiag_mps_mat: 0.83 17.97 8800.08 - triangular_5010_0505_mixDiag_mps_mat: 0.83 17.97 8800.08 - triangular_5010_0505_posDiag_mps_mat: 0.83 17.97 8800.08 - triangular_5010_0505_posDiag_mps_mat: 0.83 17.97 8800.08 - triangular_5010_0505_posDiag_mps_mat: 0.84 4.22 0.69 - triangular_5010_0506_posDiag_mps_mat: 0.64 21.26 4104.05 - triangular_5010_0506_posDiag_mps_mat: 0.55 19.10 4116.75 - triangular_5010_0506_posDiag_mps_mat: 0.70 17.60 200.07 - triangular_5010_0507_posDiag_mps_mat: 0.70 17.60 200.07 - triangular_5010_0507_posDiag_mps_mat: 0.72 15.65 19.10 4116.75 - triangular_5010_0508_posDiag_mps_mat: 0.74 18.81 - triangular_5010_0509_mixDiag_mps_mat: 0.87 16.90 4219.81 - triangular_5010_0509_mixDiag_mps_mat: 0.87 16.90 16.9 | | | | | |
| triangular-50-10.0-5_03.mixDiag.mps.mat: 0.96 19.64 426.59 - triangular-50-10.0-5_03.negDiag.mps.mat: 0.92 16.38 421.96 - triangular-50-10.0-5_03.posDiag.mps.mat: 3.06 17.95 - triangular-50-10.0-5_04.negDiag.mps.mat: 0.81 25.17 2505.85 - triangular-50-10.0-5_04.posDiag.mps.mat: 0.74 23.01 2505.86 - triangular-50-10.0-5_04.posDiag.mps.mat: 0.83 17.97 8860.08 - triangular-50-10.0-5_05.posDiag.mps.mat: 0.78 15.30 8911.73 - triangular-50-10.0-5_05.posDiag.mps.mat: 0.64 21.26 4104.05 - triangular-50-10.0-5_06.megDiag.mps.mat: 0.64 21.26 4104.05 - triangular-50-10.0-5_06.posDiag.mps.mat: 0.55 19.10 4116.75 - triangular-50-10.0-5_07.posDiag.mps.mat: 0.70 17.60 200.07 - triangular-50-10.0-5_07.posDiag.mps.mat: 0.72 15.65 199.19 - triangular-50-10.0-5_08.posDiag.mps.mat: 1. | | | | 2134.36 | |
| triangular_5010_0503_negDiag.mps.mat: 0.92 16.38 421.96 - triangular_5010_0503_posDiag.mps.mat: 3.06 17.95 - - triangular_5010_0504_mixDiag.mps.mat: 0.81 25.17 2505.86 - triangular_5010_0504_posDiag.mps.mat: 0.74 23.01 2505.86 - triangular_5010_0505_mixDiag.mps.mat: 0.83 17.97 8860.08 - triangular_5010_0505_posDiag.mps.mat: 0.78 15.30 8911.73 - triangular_5010_0505_posDiag.mps.mat: 0.78 15.30 8911.73 - triangular_5010_0506_mixDiag.mps.mat: 0.64 21.26 4104.05 - triangular_5010_0506_posDiag.mps.mat: 0.55 19.10 4116.75 - triangular_5010_0507_mixDiag.mps.mat: 0.70 17.60 200.07 - triangular_5010_0507_posDiag.mps.mat: 0.70 17.60 200.07 - triangular_5010_0508_negDiag.mps.mat: 1.22 15.65 19.91 - triang | | | | 426 50 | |
| triangular_5010_0504_mixDiag.mps.mat: 3.06 17.95 - triangular_5010_0504_mixDiag.mps.mat: 0.81 25.17 2505.85 - triangular_5010_0504_posDiag.mps.mat: 0.74 23.01 2505.86 - triangular_5010_0504_posDiag.mps.mat: 3.32 14.33 - - triangular_5010_0505_mixDiag.mps.mat: 0.83 17.97 8860.08 - triangular_5010_0505_posDiag.mps.mat: 0.78 15.30 8911.73 - triangular_5010_0505_mosping.mps.mat: 0.64 21.26 4104.05 - triangular_5010_0506_mosping.mps.mat: 0.64 21.26 4104.05 - triangular_5010_0507_mixDiag.mps.mat: 0.75 19.10 4116.75 - triangular_5010_0507_mixDiag.mps.mat: 0.72 15.65 199.19 - triangular_5010_0507_mixDiag.mps.mat: 0.72 15.65 199.19 - triangular_5010_0508_mixDiag.mps.mat: 1.22 15.96 4219.81 - triangular_5010_0509_m | | | | | |
| triangular_5010_0504_mixDiag_mps.mat: 0.81 25.17 2505.85 - triangular_5010_0504_posDiag_mps.mat: 0.74 23.01 2505.86 - triangular_5010_0504_posDiag_mps.mat: 3.32 14.33 - 1.25010_0505_mixDiag_mps.mat: 0.83 17.97 8860.08 - triangular_5010_0505_mixDiag_mps.mat: 0.83 17.97 8860.08 - triangular_5010_0505_posDiag_mps.mat: 0.78 15.30 8911.73 - triangular_5010_0506_posDiag_mps.mat: 0.64 20.69 - 1.250_06_mixDiag_mps.mat: 0.64 21.26 4104.05 - 1.250_06_posDiag_mps.mat: 0.64 21.26 4104.05 - 1.250_06_posDiag_mps.mat: 0.55 19.10 4116.75 - 1.250_06_posDiag_mps.mat: 0.55 19.10 4116.75 - 1.250_06_posDiag_mps.mat: 0.55 19.10 4116.75 - 1.250_06_posDiag_mps.mat: 0.70 17.60 200.07 - 1.250_06_posDiag_mps.mat: 0.87 25.69 9126_06 - 1.250_06_posDiag_mps.mat: 0.88 11.11 290.41 14.74 14.75 14.75 14.75 14.75 14.75 14.75 14.75 14.75 14.75 14.75 14.75 14.75 14.75 14.75 14.75 14.7 | | | | -121.50 | |
| triangular_5010_0504_negDiag_mps.mat: 0.74 23.01 2505.86 - triangular_5010_0505_mixDiag_mps.mat: 3.32 14.33 - - triangular_5010_0505_mixDiag_mps.mat: 0.83 17.97 8860.08 - triangular_5010_0505_posDiag_mps.mat: 0.78 15.30 8911.73 - triangular_5010_0505_posDiag_mps.mat: 0.64 21.26 4104.05 - triangular_5010_0506_negDiag_mps.mat: 0.64 21.26 4104.05 - triangular_5010_0506_negDiag_mps.mat: 0.55 19.10 4116.75 - triangular_5010_0507_mixDiag_mps.mat: 0.70 17.60 200.07 - triangular_5010_0507_negDiag_mps.mat: 0.72 15.65 199.19 - triangular_5010_0508_mixDiag_mps.mat: 1.22 15.66 - - triangular_5010_0508_negDiag_mps.mat: 1.22 15.96 4219.81 - triangular_5010_0509_negDiag_mps.mat: 1.25 13.73 8115.18 - triangula | | | | 2505 85 | |
| triangular_5010_0505_mixDiag.mps.mat: 0.83 17.97 8860.08 - triangular_5010_0505_mixDiag.mps.mat: 0.83 17.97 8860.08 - triangular_5010_0505_megDiag.mps.mat: 0.78 15.30 8911.73 - triangular_5010_0506_mixDiag.mps.mat: 4.42 20_69 - triangular_5010_0506_mixDiag.mps.mat: 0.64 21_26 4104.05 - triangular_5010_0506_mixDiag.mps.mat: 0.55 19.10 4116.75 - triangular_5010_0506_mixDiag.mps.mat: 0.55 19.10 4116.75 - triangular_5010_0506_mixDiag.mps.mat: 0.70 17.60 20_0.7 - triangular_5010_0507_mixDiag.mps.mat: 0.70 17.60 20_0.7 - triangular_5010_0507_megDiag.mps.mat: 0.70 17.60 20_0.7 - triangular_5010_0507_megDiag.mps.mat: 0.72 15.65 199.19 - triangular_5010_0507_megDiag.mps.mat: 1.22 15.96 4219.81 - triangular_5010_0508_mixDiag.mps.mat: 1.22 15.96 4219.81 - triangular_5010_0508_megDiag.mps.mat: 1.22 15.96 4219.81 - triangular_5010_0508_megDiag.mps.mat: 1.25 13.73 8115.18 - triangular_5010_0508_mixDiag.mps.mat: 0.87 25.69 9126.40 - triangular_5010_0509_mixDiag.mps.mat: 0.87 25.69 9126.40 - triangular_5010_0509_mixDiag.mps.mat: 13.41 108.73 - triangular_5010_0509_megDiag.mps.mat: 14.92 17.08 - triangular_5010_0509_megDiag.mps.mat: 0.59 20_80 4825_96 - triangular_5010_0510_mixDiag.mps.mat: 0.59 20_80 4825_96 - triangular_5010_10301_mixDiag.mps.mat: 0.50 11.47 14.43 - triangular_5010_10301_megDiag.mps.mat: 0.50 11.67 9.99 9.38 - triangular_5010_10302_megDiag.mps.mat: 0.50 11.67 9.99 9.38 - triangular_5010_10303_mixDiag.mps.mat: 0.54 12.99 9.38 - triangular_5010_10304_mixDiag.mps.mat: 0.50 11. | | | | | |
| triangular_5010_0505_mixDiag_mps_mat: 0.83 17.97 8860.08 - triangular_5010_0505_negDiag_mps_mat: 0.78 15.30 8911.73 - triangular_5010_0505_negDiag_mps_mat: 0.64 20.69 - - triangular_5010_0506_mixDiag_mps_mat: 0.64 21.26 4104.05 - triangular_5010_0506_posDiag_mps_mat: 0.55 19.10 4116.75 - triangular_5010_0507_mixDiag_mps_mat: 0.70 17.60 200.07 - triangular_5010_0507_megDiag_mps_mat: 0.72 15.65 199.19 - triangular_5010_0507_posDiag_mps.mat: 0.72 15.65 199.19 - triangular_5010_0508_negDiag_mps.mat: 1.22 15.96 4219.81 - triangular_5010_0508_negDiag_mps.mat: 1.22 15.96 4219.81 - triangular_5010_0509_mixDiag_mps.mat: 1.25 13.73 8115.18 - triangular_5010_0509_mixDiag_mps.mat: 0.87 25.69 9126.40 - tria | | | | | |
| triangular_5010_0505negDiag.mps.mat: 0.78 15_30 8911.73 - triangular_5010_0505posDiag.mps.mat: 4.42 20.69 - - triangular_5010_0506mixDiag.mps.mat: 0.64 21_26 4104.05 - triangular_5010_0506negDiag.mps.mat: 0.55 1910 4116.75 - triangular_5010_0506posDiag.mps.mat: 0.70 17_60 200.07 - triangular_5010_0507mixDiag.mps.mat: 0.72 15_65 199_19 - triangular_5010_0507posDiag.mps.mat: 0.72 15_65 199_19 - triangular_5010_0508posDiag.mps.mat: 1.22 15_96 4219_81 - triangular_5010_0508posDiag.mps.mat: 1.25 13_73 8115_18 - triangular_5010_0508posDiag.mps.mat: 1.25 13_73 8115_18 - triangular_5010_0509posDiag.mps.mat: 1.341 108_73 - - triangular_5010_0510negDiag.mps.mat: 1.492 17_08 - - tr | | | | 8860.08 | _ |
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| triangular_5010_0506_negDiag.mps.mat: 0.55 19.10 4116.75 - triangular_5010_0506_posDiag.mps.mat: 3.74 18.81 - - triangular_5010_0507_mixDiag.mps.mat: 0.70 17.60 200.07 - triangular_5010_0507_nosDiag.mps.mat: 0.72 15.65 199.19 - triangular_5010_0508_mixDiag.mps.mat: 3.15 15.56 - - triangular_5010_0508_mixDiag.mps.mat: 1.22 15.96 4219.81 - triangular_5010_0508_negDiag.mps.mat: 1.25 13.73 8115.18 - triangular_5010_0508_posDiag.mps.mat: 1.25 13.73 8115.18 - triangular_5010_0509_negDiag.mps.mat: 0.87 25.69 9126.40 - triangular_5010_0509_negDiag.mps.mat: 14.92 17.08 - - triangular_5010_0510_megDiag.mps.mat: 0.59 20.80 4825.96 - triangular_5010_0510_posDiag.mps.mat: 0.74 18.54 8760.68 - triangular_50_ | | 0.64 | | 4104.05 | _ |
| triangular_5010_0507_mixDiag,mps.mat: 0.70 17.60 200.07 - triangular_5010_0507_negDiag,mps.mat: 0.72 15.65 199.19 - triangular_5010_0507_posDiag,mps.mat: 3.15 15.56 - - triangular_5010_0508_mixDiag,mps.mat: 1.22 15.96 4219.81 - triangular_5010_0508_posDiag,mps.mat: 1.25 13.73 8115.18 - triangular_5010_0508_posDiag,mps.mat: 1.81 47.26 - - triangular_5010_0509_mixDiag,mps.mat: 0.87 25.69 9126.40 - triangular_5010_0509_posDiag,mps.mat: 13.41 108.73 - - triangular_5010_0510_mixDiag,mps.mat: 14.92 17.08 - - triangular_5010_0510_mixDiag,mps.mat: 0.59 20.80 4825.96 - triangular_5010_10301_mixDiag,mps.mat: 0.53 14.21 14.74 - triangular_5010_10301_mixDiag,mps.mat: 0.40 12.63 27.49 - triangular_5010_10 | | 0.55 | 19.10 | 4116.75 | - |
| triangular_5010_0507_negDiag.mps.mat: 0.72 15.65 199.19 - triangular_5010_0507_posDiag.mps.mat: 3.15 15.56 - - triangular_5010_0508_mixDiag.mps.mat: 1.22 15.96 4219.81 - triangular_5010_0508_negDiag.mps.mat: 1.25 13.73 8115.18 - triangular_5010_0508_posDiag.mps.mat: 0.87 25.69 9126.40 - triangular_5010_0509_megDiag.mps.mat: 0.87 25.69 9126.40 - triangular_5010_0509_negDiag.mps.mat: 1.492 17.08 - - triangular_5010_0510_mixDiag.mps.mat: 0.59 20.80 4825.96 - triangular_5010_0510_negDiag.mps.mat: 0.59 20.80 4825.96 - triangular_5010_0510_negDiag.mps.mat: 0.59 20.80 4825.96 - triangular_5010_10301_negDiag.mps.mat: 0.53 14.21 14.74 - triangular_5010_10301_negDiag.mps.mat: 0.40 12.63 27.49 - triangula | triangular_5010_0506_posDiag.mps.mat: | 3.74 | 18.81 | - | - |
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| triangular_5010_0508_mixDiag.mps.mat: 1.22 15.96 4219.81 - triangular_5010_0508_negDiag.mps.mat: 1.25 13.73 8115.18 - triangular_5010_0508_posDiag.mps.mat: 31.16 47.26 - - triangular_5010_0509_mixDiag.mps.mat: 0.87 25.69 9126.40 - triangular_5010_0509_negDiag.mps.mat: 13.41 108.73 - - triangular_5010_0509_posDiag.mps.mat: 14.92 17.08 - - triangular_5010_0510_mixDiag.mps.mat: 0.59 20.80 4825.96 - triangular_5010_0510_negDiag.mps.mat: 0.74 18.54 8760.68 - triangular_5010_10510_posDiag.mps.mat: 0.53 14.21 14.74 - triangular_5010_10301_negDiag.mps.mat: 0.40 12.63 27.49 - triangular_5010_10301_posDiag.mps.mat: 0.83 11.11 290.41 - triangular_5010_10302_negDiag.mps.mat: 0.55 11.71 14.35 - triangular_5 | $triangular_50\10_0\5__07_negDiag.mps.mat:$ | 0.72 | 15.65 | 199.19 | - |
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| triangular_5010_0509_posDiag.mps.mat: 14.92 17.08 - - triangular_5010_0510_mixDiag.mps.mat: 0.59 20.80 4825.96 - triangular_5010_0510_negDiag.mps.mat: 0.74 18.54 8760.68 - triangular_5010_10510_posDiag.mps.mat: 25.98 46.97 - - triangular_5010_10301_mixDiag.mps.mat: 0.53 14.21 14.74 - triangular_5010_10301_negDiag.mps.mat: 0.40 12.63 27.49 - triangular_5010_10301_posDiag.mps.mat: 0.83 11.11 290.41 - triangular_5010_10302_mixDiag.mps.mat: 0.55 11.71 14.35 - triangular_5010_10302_posDiag.mps.mat: 0.44 13.51 33.04 - triangular_5010_10302_posDiag.mps.mat: 0.54 15.28 183.54 - triangular_5010_10303_negDiag.mps.mat: 0.62 11.67 9.19 - triangular_5010_10303_negDiag.mps.mat: 0.54 12.99 9.38 - triangular_5010_10304_negDiag.mps.mat: 0.42 12.37 11.69 -< | | | | 9126.40 | - |
| triangular_5010_0510_mixDiag.mps.mat: 0.59 20.80 4825.96 - triangular_5010_0510_negDiag.mps.mat: 0.74 18.54 8760.68 - triangular_5010_0510_posDiag.mps.mat: 25.98 46.97 - - triangular_5010_10301_mixDiag.mps.mat: 0.53 14.21 14.74 - triangular_5010_10301_negDiag.mps.mat: 0.40 12.63 27.49 - triangular_5010_10301_posDiag.mps.mat: 0.83 11.11 290.41 - triangular_5010_10302_mixDiag.mps.mat: 0.55 11.71 14.35 - triangular_5010_10302_negDiag.mps.mat: 0.44 13.51 33.04 - triangular_5010_10302_posDiag.mps.mat: 0.54 15.28 183.54 - triangular_5010_10303_negDiag.mps.mat: 0.62 11.67 9.19 - triangular_5010_10303_posDiag.mps.mat: 0.54 12.99 9.38 - triangular_5010_10304_mixDiag.mps.mat: 0.57 14.86 326.08 - triangular_5010_10304_negDiag.mps.mat: 0.85 13.34 8.51 <td< td=""><td></td><td></td><td></td><td>-</td><td>-</td></td<> | | | | - | - |
| triangular_5010_0510_negDiag.mps.mat: 0.74 18.54 8760.68 - triangular_5010_0510_posDiag.mps.mat: 25.98 46.97 - - triangular_5010_10301_mixDiag.mps.mat: 0.53 14.21 14.74 - triangular_5010_10301_negDiag.mps.mat: 0.40 12.63 27.49 - triangular_5010_10301_posDiag.mps.mat: 0.83 11.11 290.41 - triangular_5010_10302_mixDiag.mps.mat: 0.55 11.71 14.35 - triangular_5010_10302_negDiag.mps.mat: 0.44 13.51 33.04 - triangular_5010_10302_posDiag.mps.mat: 0.54 15.28 183.54 - triangular_5010_10303_mixDiag.mps.mat: 0.62 11.67 9.19 - triangular_5010_10303_posDiag.mps.mat: 0.54 12.99 9.38 - triangular_5010_10304_mixDiag.mps.mat: 0.57 14.86 326.08 - triangular_5010_10304_negDiag.mps.mat: 0.85 13.34 8.51 - triangular_5010_10304_negDiag.mps.mat: 0.50 11.82 45.79 | | | | - | - |
| triangular_5010_0510_posDiag.mps.mat: 25.98 46.97 - - triangular_5010_10301_mixDiag.mps.mat: 0.53 14.21 14.74 - triangular_5010_10301_negDiag.mps.mat: 0.40 12.63 27.49 - triangular_5010_10301_posDiag.mps.mat: 0.83 11.11 290.41 - triangular_5010_10302_mixDiag.mps.mat: 0.55 11.71 14.35 - triangular_5010_10302_negDiag.mps.mat: 0.44 13.51 33.04 - triangular_5010_10302_posDiag.mps.mat: 0.54 15.28 183.54 - triangular_5010_10303_mixDiag.mps.mat: 0.62 11.67 9.19 - triangular_5010_10303_negDiag.mps.mat: 0.54 12.99 9.38 - triangular_5010_10303_posDiag.mps.mat: 0.57 14.86 326.08 - triangular_5010_10304_negDiag.mps.mat: 0.42 12.37 11.69 - triangular_5010_10304_negDiag.mps.mat: 0.85 13.34 8.51 - triangular_5010_10304_negDiag.mps.mat: 0.50 11.82 45.79 - | | | | | - |
| triangular_5010_10301_mixDiag.mps.mat: 0.53 14.21 14.74 - triangular_5010_10301_negDiag.mps.mat: 0.40 12.63 27.49 - triangular_5010_10301_posDiag.mps.mat: 0.83 11.11 290.41 - triangular_5010_10302_mixDiag.mps.mat: 0.55 11.71 14.35 - triangular_5010_10302_negDiag.mps.mat: 0.44 13.51 33.04 - triangular_5010_10302_posDiag.mps.mat: 0.54 15.28 183.54 - triangular_5010_10303_mixDiag.mps.mat: 0.62 11.67 9.19 - triangular_5010_10303_negDiag.mps.mat: 0.54 12.99 9.38 - triangular_5010_10303_posDiag.mps.mat: 0.57 14.86 326.08 - triangular_5010_10304_mixDiag.mps.mat: 0.42 12.37 11.69 - triangular_5010_10304_negDiag.mps.mat: 0.85 13.34 8.51 - triangular_5010_10304_posDiag.mps.mat: 0.50 11.82 45.79 - triangular_5010_10305_mixDiag.mps.mat: 0.54 15.69 59.97 < | | | | 8760.68 | - |
| triangular_5010_10301_negDiag.mps.mat: 0.40 12.63 27.49 - triangular_5010_10301_posDiag.mps.mat: 0.83 11.11 290.41 - triangular_5010_10302_mixDiag.mps.mat: 0.55 11.71 14.35 - triangular_5010_10302_negDiag.mps.mat: 0.44 13.51 33.04 - triangular_5010_10302_posDiag.mps.mat: 0.54 15.28 183.54 - triangular_5010_10303_mixDiag.mps.mat: 0.62 11.67 9.19 - triangular_5010_10303_negDiag.mps.mat: 0.54 12.99 9.38 - triangular_5010_10303_posDiag.mps.mat: 0.57 14.86 326.08 - triangular_5010_10304_mixDiag.mps.mat: 0.42 12.37 11.69 - triangular_5010_10304_negDiag.mps.mat: 0.85 13.34 8.51 - triangular_5010_10304_posDiag.mps.mat: 0.50 11.82 45.79 - triangular_5010_10305_mixDiag.mps.mat: 0.54 15.69 59.97 - | | | | - | |
| triangular_5010_10301_posDiag.mps.mat: 0.83 11.11 290.41 - triangular_5010_10302_mixDiag.mps.mat: 0.55 11.71 14.35 - triangular_5010_10302_negDiag.mps.mat: 0.44 13.51 33.04 - triangular_5010_10302_posDiag.mps.mat: 0.54 15.28 183.54 - triangular_5010_10303_mixDiag.mps.mat: 0.62 11.67 9.19 - triangular_5010_10303_negDiag.mps.mat: 0.54 12.99 9.38 - triangular_5010_10303_posDiag.mps.mat: 0.57 14.86 326.08 - triangular_5010_10304_mixDiag.mps.mat: 0.42 12.37 11.69 - triangular_5010_10304_negDiag.mps.mat: 0.85 13.34 8.51 - triangular_5010_10304_posDiag.mps.mat: 0.50 11.82 45.79 - triangular_5010_10305_mixDiag.mps.mat: 0.54 15.69 59.97 - | | | | | |
| triangular_5010_10302_mixDiag.mps.mat: 0.55 11.71 14.35 - triangular_5010_10302_negDiag.mps.mat: 0.44 13.51 33.04 - triangular_5010_10302_posDiag.mps.mat: 0.54 15.28 183.54 - triangular_5010_10303_mixDiag.mps.mat: 0.62 11.67 9.19 - triangular_5010_10303_negDiag.mps.mat: 0.54 12.99 9.38 - triangular_5010_10303_posDiag.mps.mat: 0.57 14.86 326.08 - triangular_5010_10304_mixDiag.mps.mat: 0.42 12.37 11.69 - triangular_5010_10304_negDiag.mps.mat: 0.85 13.34 8.51 - triangular_5010_10304_posDiag.mps.mat: 0.50 11.82 45.79 - triangular_5010_10305_mixDiag.mps.mat: 0.54 15.69 59.97 - | | | | | - |
| triangular_5010_10302_negDiag.mps.mat: 0.44 13.51 33.04 - triangular_5010_10302_posDiag.mps.mat: 0.54 15.28 183.54 - triangular_5010_10303_mixDiag.mps.mat: 0.62 11.67 9.19 - triangular_5010_10303_negDiag.mps.mat: 0.54 12.99 9.38 - triangular_5010_10303_posDiag.mps.mat: 0.57 14.86 326.08 - triangular_5010_10304_mixDiag.mps.mat: 0.42 12.37 11.69 - triangular_5010_10304_negDiag.mps.mat: 0.85 13.34 8.51 - triangular_5010_10304_posDiag.mps.mat: 0.50 11.82 45.79 - triangular_5010_10305_mixDiag.mps.mat: 0.54 15.69 59.97 - | 9 · | | | | |
| triangular_5010_10302_posDiag.mps.mat: 0.54 15.28 183.54 - triangular_5010_10303_mixDiag.mps.mat: 0.62 11.67 9.19 - triangular_5010_10303_negDiag.mps.mat: 0.54 12.99 9.38 - triangular_5010_10303_posDiag.mps.mat: 0.57 14.86 326.08 - triangular_5010_10304_mixDiag.mps.mat: 0.42 12.37 11.69 - triangular_5010_10304_negDiag.mps.mat: 0.85 13.34 8.51 - triangular_5010_10304_posDiag.mps.mat: 0.50 11.82 45.79 - triangular_5010_10305_mixDiag.mps.mat: 0.54 15.69 59.97 - | | | | | |
| triangular_5010_10303_mixDiag.mps.mat: 0.62 11.67 9.19 - triangular_5010_10303_negDiag.mps.mat: 0.54 12.99 9.38 - triangular_5010_10303_posDiag.mps.mat: 0.57 14.86 326.08 - triangular_5010_10304_mixDiag.mps.mat: 0.42 12.37 11.69 - triangular_5010_10304_negDiag.mps.mat: 0.85 13.34 8.51 - triangular_5010_10304_posDiag.mps.mat: 0.50 11.82 45.79 - triangular_5010_10305_mixDiag.mps.mat: 0.54 15.69 59.97 - | | | | | |
| triangular_5010_10303_negDiag.mps.mat: 0.54 12.99 9.38 - triangular_5010_10303_posDiag.mps.mat: 0.57 14.86 326.08 - triangular_5010_10304_mixDiag.mps.mat: 0.42 12.37 11.69 - triangular_5010_10304_negDiag.mps.mat: 0.85 13.34 8.51 - triangular_5010_10304_posDiag.mps.mat: 0.50 11.82 45.79 - triangular_5010_10305_mixDiag.mps.mat: 0.54 15.69 59.97 - | | | | | |
| triangular_5010_10303_posDiag.mps.mat: 0.57 14.86 326.08 - triangular_5010_10304_mixDiag.mps.mat: 0.42 12.37 11.69 - triangular_5010_10304_negDiag.mps.mat: 0.85 13.34 8.51 - triangular_5010_10304_posDiag.mps.mat: 0.50 11.82 45.79 - triangular_5010_10305_mixDiag.mps.mat: 0.54 15.69 59.97 - | 9 . | | | | |
| triangular_5010_10304_mixDiag.mps.mat: 0.42 12.37 11.69 - triangular_5010_10304_negDiag.mps.mat: 0.85 13.34 8.51 - triangular_5010_10304_posDiag.mps.mat: 0.50 11.82 45.79 - triangular_5010_10305_mixDiag.mps.mat: 0.54 15.69 59.97 - | | | | | - |
| triangular_5010_10304_negDiag.mps.mat: 0.85 13.34 8.51 - triangular_5010_10304_posDiag.mps.mat: 0.50 11.82 45.79 - triangular_5010_10305_mixDiag.mps.mat: 0.54 15.69 59.97 - | | | | | - |
| triangular_5010_10304_posDiag.mps.mat: 0.50 11.82 45.79 - triangular_5010_10305_mixDiag.mps.mat: 0.54 15.69 59.97 - | | | | | |
| triangular_5010_10305_mixDiag.mps.mat: 0.54 15.69 59.97 - | | | | | - |
| | | | | | - |
| | | | | | - |

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| | Solution Time (s) | | | |
|--|-------------------|---------------|---------------|-------|
| SQP instance | quadprogIP | quadprogBB | CPLEX | BARON |
| $triangular_50\10_10\3__05_posDiag.mps.mat:$ | 0.55 | 10.88 | 170.68 | - |
| $triangular_50\10_10\3__06_mixDiag.mps.mat:$ | 0.52 | 13.47 | 33.82 | - |
| $triangular_50\10_10\3__06_negDiag.mps.mat:$ | 0.46 | 19.10 | 39.64 | - |
| triangular_5010_10306_posDiag.mps.mat: | 0.87 | 15.99 | 300.25 | - |
| triangular_5010_10307_mixDiag.mps.mat: | 0.97 | 11.99 | 47.31 | - |
| triangular_5010_10307_negDiag.mps.mat: | 0.70 | 17.32 | 61.56 | - |
| triangular_5010_10307_posDiag.mps.mat: | 0.52 | 19.77 | 667.46 | - |
| triangular_5010_10308_mixDiag.mps.mat: | 0.53 | 12.23 | 28.93 | - |
| triangular_5010_10308_negDiag.mps.mat: | 0.49 | 12.45 | 23.58 | - |
| triangular_5010_10308_posDiag.mps.mat: | 0.69 | 11.39 | 109.18 | - |
| triangular_5010_10309_mixDiag.mps.mat: | 0.48 | 22.55 | 76.74 | - |
| triangular_5010_10309_negDiag.mps.mat: | 0.62 | 21.19 | 71.83 | - |
| triangular_5010_10309_posDiag.mps.mat: | 0.89 | 12.49 | 234.24 | - |
| triangular_5010_10310_mixDiag.mps.mat: | 0.87 | 11.62 | 45.84 | - |
| triangular_5010_10310_negDiag.mps.mat: | 0.75 | 12.75 | 14.79 | - |
| triangular_5010_10310_posDiag.mps.mat: | 0.60 | 15.51 | 397.62 | - |
| triangular_5010_10_001_mixDiag.mps.mat: | 0.55 | 13.02 | 7.80 | - |
| triangular_5010_10_001_negDiag.mps.mat: | 0.67 | 14.71 | 17.82 | - |
| triangular_5010_10_001_posDiag.mps.mat: | 0.54 | 10.40 | 36.84 | - |
| triangular_5010_10_0_02_mixDiag.mps.mat: triangular_5010_10_0_02_negDiag.mps.mat: | 0.63 | 11.17 | 15.08 | - |
| 0 0 1 | 0.58 | 11.59 14.21 | 5.06 | - |
| triangular_5010_10_0_02_posDiag.mps.mat: triangular_5010_10_0_03_mixDiag.mps.mat: | 0.62 | | 53.37 | - |
| triangular_5010_10_003_negDiag.mps.mat: triangular_5010_10_003_negDiag.mps.mat: | $0.42 \\ 0.52$ | 10.39 10.74 | 5.41 4.89 | - |
| triangular_5010_10_0_03_negDiag.mps.mat: triangular_5010_10_0_03_posDiag.mps.mat: | | | | - |
| triangular_5010_10_005_posDiag.mps.mat: triangular_5010_10_004_mixDiag.mps.mat: | $0.45 \\ 0.53$ | 9.93 10.30 | 61.93 15.07 | - |
| triangular_5010_10_004_negDiag.mps.mat: | 0.55 | 12.35 | 16.84 | _ |
| triangular_5010_10_004_negDiag.mps.mat: triangular_5010_10_004_posDiag.mps.mat: | 0.59 | 9.77 | 67.97 | _ |
| triangular_5010_10_005_mixDiag.mps.mat: | 0.59 | 10.47 | 31.36 | _ |
| triangular_5010_10_005_negDiag.mps.mat: | 0.56 | 11.39 | 10.88 | _ |
| triangular_5010_10_0_05_posDiag.mps.mat: | 0.55 | 10.37 | 71.24 | _ |
| triangular_5010_10_0_06_mixDiag.mps.mat: | 0.41 | 21.74 | 40.30 | _ |
| triangular_5010_10_0_06_negDiag.mps.mat: | 0.62 | 10.77 | 6.63 | _ |
| triangular_5010_10_0_06_posDiag.mps.mat: | 0.46 | 10.71 | 40.99 | _ |
| triangular_5010_10_0_07_mixDiag.mps.mat: | 0.58 | 10.31 | 15.56 | _ |
| triangular_5010_10_0_07_negDiag.mps.mat: | 0.58 | 11.54 | 8.41 | _ |
| triangular_5010_10_0_07_posDiag.mps.mat: | 0.46 | 10.49 | 51.87 | _ |
| triangular_5010_10_0_08_mixDiag.mps.mat: | 0.56 | 13.98 | 9.97 | _ |
| triangular_5010_10_008_negDiag.mps.mat: | 0.75 | 10.16 | 5.23 | _ |
| triangular_5010_10_008_posDiag.mps.mat: | 0.54 | 10.20 | 52.70 | _ |
| triangular_5010_10_009_mixDiag.mps.mat: | 0.81 | 10.68 | 22.65 | _ |
| triangular_5010_10_009_negDiag.mps.mat: | 0.55 | 11.03 | 7.99 | _ |
| triangular_5010_10_009_posDiag.mps.mat: | 0.54 | 10.94 | 97.30 | _ |
| triangular_5010_10_010_mixDiag.mps.mat: | 0.65 | 11.51 | 8.00 | _ |
| triangular_5010_10_010_negDiag.mps.mat: | 0.62 | 15.45 | 6.78 | _ |
| triangular_5010_10_010_posDiag.mps.mat: | 0.47 | 10.31 | 45.47 | _ |
| triangular_5010_10_301_mixDiag.mps.mat: | 0.51 | 8.79 | 14.33 | _ |
| triangular_5010_10_301_negDiag.mps.mat: | 0.60 | 12.24 | 5.75 | - |
| triangular_5010_10_301_posDiag.mps.mat: | 0.67 | 8.30 | 29.50 | - |
| triangular_5010_10_302_mixDiag.mps.mat: | 0.72 | 10.44 | 6.32 | - |
| triangular_5010_10_302_negDiag.mps.mat: | 0.55 | 15.90 | 7.76 | - |
| triangular_5010_10_302_posDiag.mps.mat: | 0.54 | 13.23 | 35.63 | - |
| triangular_5010_10_303_mixDiag.mps.mat: | 0.43 | 9.84 | 8.11 | - |
| triangular_5010_10_303_negDiag.mps.mat: | 0.74 | 14.05 | 4.74 | - |
| $triangular_50\10_10_3__03_posDiag.mps.mat:$ | 0.74 | 9.75 | 31.15 | - |

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| | Solution Time (s) | | | |
|--|-------------------|------------|--------|--------|
| SQP instance | quadprogIP | quadprogBB | CPLEX | BARON |
| triangular_5010_10_304_mixDiag.mps.mat: | 0.67 | 9.96 | 11.51 | _ |
| triangular_5010_10_304_negDiag.mps.mat: | 0.62 | 10.78 | 6.96 | _ |
| triangular_5010_10_304_posDiag.mps.mat: | 0.46 | 9.21 | 26.58 | _ |
| triangular_5010_10_305_mixDiag.mps.mat: | 0.70 | 9.08 | 4.59 | _ |
| triangular_5010_10_305_negDiag.mps.mat: | 0.65 | 9.31 | 5.43 | _ |
| triangular_5010_10_305_posDiag.mps.mat: | 0.64 | 9.45 | 36.36 | _ |
| triangular_5010_10_306_mixDiag.mps.mat: | 0.54 | 9.64 | 8.31 | _ |
| triangular_5010_10_306_negDiag.mps.mat: | 0.58 | 10.71 | 4.38 | _ |
| triangular_5010_10_306_posDiag.mps.mat: | 0.50 | 10.15 | 9.42 | _ |
| triangular_5010_10_307_mixDiag.mps.mat: | 0.87 | 8.62 | 5.61 | _ |
| triangular_5010_10_307_negDiag.mps.mat: | 0.60 | 9.75 | 3.05 | _ |
| triangular_5010_10_307_posDiag.mps.mat: | 0.60 | 8.78 | 35.52 | _ |
| triangular_5010_10_308_mixDiag.mps.mat: | 0.61 | 9.53 | 4.40 | - |
| triangular_5010_10_308_negDiag.mps.mat: | 0.41 | 10.59 | 3.22 | _ |
| triangular_5010_10_308_posDiag.mps.mat: | 0.62 | 8.99 | 8.69 | _ |
| triangular_5010_10_309_mixDiag.mps.mat: | 0.63 | 9.56 | 15.26 | _ |
| triangular_5010_10_309_negDiag.mps.mat: | 0.57 | 13.30 | 4.22 | _ |
| triangular_5010_10_309_posDiag.mps.mat: | 0.63 | 9.16 | 7.25 | _ |
| triangular_5010_10_3_10_mixDiag.mps.mat: | 0.64 | 9.47 | 14.60 | - |
| triangular_5010_10_310_negDiag.mps.mat: | 0.52 | 9.58 | 6.10 | _ |
| triangular_5010_10_310_posDiag.mps.mat: | 0.56 | 12.18 | 48.72 | - |
| triangular_50_0_10_501_mixDiag.mps.mat: | 0.27 | 11.75 | 7.25 | 55.43 |
| triangular_50_0_10_501_negDiag.mps.mat: | 0.27 | 463.71 | 0.26 | 0.80 |
| triangular_50_0_10_501_posDiag.mps.mat: | 0.25 | 9.45 | 7.22 | 55.33 |
| triangular_50_0_10_502_mixDiag.mps.mat: | 0.49 | 28.52 | 17.84 | 239.14 |
| triangular_50_0_10_502_negDiag.mps.mat: | 0.26 | 587.17 | 0.23 | 0.63 |
| triangular_50_0_10_502_posDiag.mps.mat: | 0.36 | 28.59 | 18.05 | 238.94 |
| triangular_50_0_10_503_mixDiag.mps.mat: | 0.43 | 26.17 | 18.27 | 18.39 |
| $triangular_50_0_10_5__03_negDiag.mps.mat:$ | 0.26 | 427.17 | 0.03 | 0.56 |
| $triangular_50_0_10_5__03_posDiag.mps.mat:$ | 0.42 | 26.22 | 18.59 | 18.40 |
| $triangular_50_0_10_5_04_mixDiag.mps.mat:$ | 0.36 | 12.63 | 9.11 | 20.87 |
| $triangular_50_0_10_5_04_negDiag.mps.mat:$ | 0.26 | 881.50 | 0.28 | 0.56 |
| $triangular_50_0_10_5__04_posDiag.mps.mat:$ | 0.39 | 12.75 | 9.10 | 20.91 |
| $triangular_50_0_10_5__05_mixDiag.mps.mat:$ | 0.36 | 8.72 | 75.25 | 36.92 |
| $triangular_50_0_10_5__05_negDiag.mps.mat:$ | 0.27 | 413.93 | 0.11 | 0.98 |
| $triangular_50_0_10_5__05_posDiag.mps.mat:$ | 0.34 | 8.80 | 79.70 | 36.93 |
| $triangular_50_0_10_5__06_mixDiag.mps.mat:$ | 0.46 | 21.99 | 84.93 | 65.48 |
| $triangular_50_0_10_5__06_negDiag.mps.mat:$ | 0.27 | 759.58 | 0.37 | 0.86 |
| $triangular_50_0_10_5__06_posDiag.mps.mat:$ | 0.50 | 19.78 | 84.02 | 65.22 |
| $triangular_50_0_10_5__07_mixDiag.mps.mat:$ | 0.37 | 8.93 | 2.71 | 19.84 |
| $triangular_50_0_10_5__07_negDiag.mps.mat:$ | 0.39 | 1005.90 | 0.28 | 0.57 |
| triangular_50_0_10_507_posDiag.mps.mat: | 0.41 | 8.84 | 2.64 | 19.83 |
| $triangular_50_0_10_5__08_mixDiag.mps.mat:$ | 0.52 | 21.45 | 3.14 | 16.91 |
| triangular_50_0_10_508_negDiag.mps.mat: | 0.26 | 595.66 | 0.38 | 0.59 |
| triangular_50_0_10_508_posDiag.mps.mat: | 0.48 | 21.41 | 3.07 | 16.91 |
| $triangular_50_0_10_5__09_mixDiag.mps.mat:$ | 0.58 | 13.05 | 100.73 | 37.20 |
| triangular_50_0_10_509_negDiag.mps.mat: | 0.27 | 894.11 | 0.13 | 0.65 |
| triangular_50_0_10_509_posDiag.mps.mat: | 0.54 | 13.15 | 96.06 | 37.20 |
| triangular_50_0_10_510_mixDiag.mps.mat: | 0.69 | 9.37 | 25.97 | 226.95 |
| triangular_50_0_10_510_negDiag.mps.mat: | 0.26 | 664.75 | 0.25 | 0.54 |
| triangular_50_0_10_510_posDiag.mps.mat: | 0.47 | 9.38 | 25.46 | 227.25 |

Table 2: Solution time in seconds for SQP30 and SQP50 instances. Dash "-" indicates that solver was unable to solve the instance within the maximum allowed time of 10^4 s.

3. Raw Data for Figure 3: BoxQP instances

| | Solution Time (s) | | | |
|------------------------------|-------------------|------------|--------|---------|
| BoxQP instance | quadprogIP | quadprogBB | CPLEX | BARON |
| spar020-100-1.mat: | 0.54 | 8.05 | 0.14 | 0.26 |
| spar 0 2 0 - 1 0 0 - 2. mat: | 0.47 | 4.94 | 0.36 | 0.90 |
| spar020-100-3.mat: | 0.52 | 1.95 | 0.39 | 0.41 |
| spar030-060-1.mat: | 10.64 | 24.48 | 1.38 | 1.32 |
| spar030-060-2.mat: | 0.72 | 5.60 | 0.37 | 0.66 |
| spar 0 3 0 - 0 6 0 - 3. mat: | 2.74 | 28.07 | 0.94 | 1.91 |
| spar030-070-1.mat: | 27.63 | 24.11 | 1.97 | 7.20 |
| spar030-070-2.mat: | 1.26 | 8.63 | 0.53 | 0.75 |
| spar 0 3 0 - 0 7 0 - 3. mat: | 1.38 | 39.31 | 0.56 | 2.16 |
| spar 0 3 0 - 0 8 0 - 1.mat: | 20.29 | 29.98 | 2.83 | 4.43 |
| spar030-080-2.mat: | 0.70 | 3.74 | 0.18 | 0.39 |
| spar 0 3 0 - 0 8 0 - 3. mat: | 0.56 | 5.75 | 0.21 | 1.21 |
| spar030-090-1.mat: | 2.16 | 4.02 | 1.02 | 3.92 |
| spar 0 3 0 - 0 9 0 - 2. mat: | 2.41 | 18.24 | 1.23 | 3.74 |
| spar 0 3 0 - 0 9 0 - 3. mat: | 1.42 | 3.89 | 0.61 | 0.94 |
| spar030-100-1.mat: | 12.15 | 5.87 | 1.81 | 11.70 |
| spar 0 3 0 - 1 0 0 - 2. mat: | 18.86 | 8.91 | 2.93 | 3.03 |
| spar 0 3 0 - 1 0 0 - 3. mat: | 2.81 | 25.93 | 1.74 | 16.18 |
| spar 0 40 - 0 30 - 1.mat: | 1.50 | 17.13 | 0.06 | 0.24 |
| spar040-030-2.mat: | 1.47 | 18.68 | 0.25 | 0.85 |
| spar 0 40 - 0 30 - 3.mat: | 1.70 | 23.95 | 0.15 | 0.42 |
| spar040-040-1.mat: | 70.75 | 87.95 | 2.29 | 3.65 |
| spar040-040-2.mat: | 2.88 | 7.65 | 0.19 | 0.73 |
| spar040-040-3.mat: | 50.44 | 30.51 | 2.15 | 1.97 |
| spar040-050-1.mat: | 50.87 | 48.05 | 1.62 | 6.80 |
| spar 0 40 - 0 50 - 2.mat: | 21.62 | 76.76 | 0.90 | 2.05 |
| spar040-050-3.mat: | 24.26 | 35.10 | 1.01 | 4.62 |
| spar040-060-1.mat: | 279.90 | 265.21 | 4.33 | 47.23 |
| spar040-060-2.mat: | 4.62 | 28.50 | 0.96 | 3.30 |
| spar040-060-3.mat: | 2.55 | 7.08 | 0.76 | 0.61 |
| spar040-070-1.mat: | 39.64 | 17.35 | 3.18 | 22.32 |
| spar040-070-2.mat: | 38.11 | 9.16 | 1.70 | 16.60 |
| spar040-070-3.mat: | 22.40 | 23.72 | 1.37 | 7.67 |
| spar040-080-1.mat: | 136.50 | 8.36 | 4.08 | 24.85 |
| spar040-080-2.mat: | 97.98 | 9.58 | 2.92 | 14.29 |
| spar040-080-3.mat: | 23.60 | 26.01 | 3.86 | 10.02 |
| spar040-090-1.mat: | 90.55 | 20.97 | 4.78 | 33.17 |
| spar040-090-2.mat: | 114.86 | 17.12 | 8.50 | 3.38 |
| spar040-090-3.mat: | 41.40 | 8.53 | 3.54 | 20.13 |
| spar040-100-1.mat: | 50.82 | 20.43 | 5.76 | 5.25 |
| spar040-100-2.mat: | 433.76 | 36.40 | 13.23 | 135.68 |
| spar040-100-3.mat: | _ | 111.03 | 143.34 | 3464.90 |
| spar050-030-1.mat: | 6.35 | 13.96 | 0.23 | 0.46 |
| spar050-030-2.mat: | 74.57 | 60.81 | 1.67 | 0.98 |
| spar050-030-3.mat: | 51.58 | 101.20 | 1.17 | 1.24 |
| spar050-040-1.mat: | 219.59 | 28.29 | 3.89 | 3.48 |
| spar050-040-2.mat: | 363.39 | 99.58 | 3.01 | 5.00 |
| spar050-040-3.mat: | 67.18 | 25.73 | 1.51 | 6.12 |
| spar050-050-1.mat: | - | 844.37 | 59.04 | 151.53 |
| spar050-050-2.mat: | 9362.43 | 186.92 | 6.26 | 9.20 |

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| continued. | Solution Time (s) | | | |
|--|-------------------|------------|---------|---------|
| BoxQP instance | quadprogIP | quadprogBB | CPLEX | BARON |
| spar050-050-3.mat: | _ | 151.02 | 8.57 | 14.81 |
| spar060-020-1.mat: | 73.57 | 61.98 | 0.45 | 1.23 |
| spar060-020-2.mat: | 25.95 | 120.08 | 0.32 | 0.60 |
| spar060-020-3.mat: | 307.08 | 122.56 | 1.35 | 0.74 |
| spar070-025-1.mat: | _ | 303.65 | 2.99 | 12.10 |
| spar070-025-2.mat: | _ | 225.25 | 6.28 | 25.20 |
| spar070-025-3.mat: | _ | 433.58 | 7.00 | 11.85 |
| spar070-050-1.mat: | _ | 303.67 | 75.62 | 596.89 |
| spar070-050-2.mat: | _ | 176.07 | 36.06 | 153.62 |
| spar070-050-3.mat: | - | 51.10 | 11.15 | 6.80 |
| spar070-075-1.mat: | - | 421.36 | 583.27 | - |
| spar070-075-2.mat: | - | 1975.02 | - | - |
| spar070-075-3.mat: | - | 930.34 | 5527.54 | _ |
| spar080-025-1.mat: | - | 194.12 | 5.04 | 13.31 |
| spar080-025-2.mat: | - | 561.83 | 21.18 | 651.05 |
| spar080-025-3.mat: | - | 649.85 | 12.37 | 47.60 |
| spar080-050-1.mat: | - | 7036.10 | - | _ |
| spar 080-050-2.mat: | - | 222.22 | 79.98 | 419.26 |
| spar080-050-3.mat: | - | 961.18 | 125.12 | 333.29 |
| spar 080-075-1.mat: | - | 1020.16 | - | - |
| spar 080-075-2.mat: | - | 1593.86 | - | - |
| spar 080-075-3.mat: | - | 4039.24 | - | - |
| $spar 090 \hbox{-} 025 \hbox{-} 1. mat:$ | - | 1873.96 | 47.46 | 192.00 |
| $spar 090 \hbox{-} 025 \hbox{-} 2. mat:$ | - | 1437.05 | 40.33 | 212.72 |
| spar 090-025-3.mat: | - | 1144.72 | 27.98 | 131.82 |
| spar 090-050-1.mat: | - | 3306.96 | 2653.66 | - |
| spar 090-050-2.mat: | - | 702.29 | 250.20 | 795.44 |
| spar 090-050-3. mat: | - | 2308.84 | 261.05 | 9413.98 |
| spar 090-075-1.mat: | - | 9078.98 | - | - |
| spar 090-075-2.mat: | - | 8842.31 | - | - |
| spar 090-075-3.mat: | - | 3562.65 | - | - |
| spar 100-025-1.mat: | - | 1507.06 | 108.77 | 3713.21 |
| spar100-025-2.mat: | - | 1103.15 | 74.77 | 988.46 |
| spar 100-025-3.mat: | - | 1253.51 | 64.97 | 676.99 |
| spar100-050-1.mat: | - | - | - | - |
| spar 100-050-2.mat: | - | - | - | - |
| spar 100-050-3. mat: | - | 2153.70 | - | - |
| spar 100-075-1.mat: | - | - | - | - |
| spar 100-075-2.mat: | - | - | - | - |
| spar100-075-3.mat: | - | - | - | - |

Table 3: Solution time in seconds for BoxQP instances. Dash "-" indicates that solver was unable to solve the instance within the maximum allowed time of 10^4 s.

4. Raw Data for Figure 4: BoxQP instances

| | Solution Time (s) | | | |
|---|-------------------|------------|-----------------------------|--|
| BoxQP instance | quadprogIP | quadprogBB | quadprogIP+constraints (30) | |
| spar020-100-1.mat: | 0.57 | 0.43 | 8.05 | |
| spar020-100-2.mat: | 0.37 | 0.51 | 4.94 | |
| spar020-100-3.mat: | 0.36 | 0.41 | 1.95 | |
| spar030-060-1.mat: | 10.64 | 11.15 | 24.48 | |
| spar030-060-2.mat: | 0.68 | 0.57 | 5.60 | |
| spar030-060-3.mat: | 2.75 | 2.22 | 28.07 | |
| spar030-070-1.mat: | 27.97 | 15.08 | 24.11 | |
| spar030-070-2.mat: | 1.17 | 1.02 | 8.63 | |
| spar030-070-3.mat: | 1.44 | 1.21 | 39.31 | |
| spar030-080-1.mat: | 20.39 | 11.88 | 29.98 | |
| spar030-080-2.mat: | 0.72 | 0.60 | 3.74 | |
| spar030-080-3.mat: | 0.67 | 0.85 | 5.75 | |
| spar030-090-1.mat: | 2.22 | 2.14 | 4.02 | |
| spar030-090-2.mat: | 2.42 | 2.02 | 18.24 | |
| spar030-090-3.mat: | 1.50 | 1.35 | 3.89 | |
| spar030-100-1.mat: | 12.19 | 4.22 | 5.87 | |
| spar030-100-2.mat: | 19.07 | 9.23 | 8.91 | |
| spar030-100-3.mat: | 2.82 | 2.31 | 25.93 | |
| spar040-030-1.mat: | 1.61 | 1.39 | 17.13 | |
| spar040-030-2.mat: | 1.38 | 1.33 | 18.68 | |
| spar040-030-3.mat: | 1.64 | 1.41 | 23.95 | |
| spar040-040-1.mat: | 70.50 | 51.72 | 87.95 | |
| spar040-040-2.mat: | 2.93 | 2.27 | 7.65 | |
| spar040-040-3.mat: | 50.96 | 48.04 | 30.51 | |
| spar040-050-1.mat: | 51.48 | 35.72 | 48.05 | |
| spar040-050-2.mat: | 21.54 | 17.44 | 76.76 | |
| spar040-050-3.mat: | 24.43 | 17.08 | 35.10 | |
| spar040-060-1.mat: | 282.22 | 329.53 | 265.21 | |
| spar040-060-2.mat: | 4.66 | 4.45 | 28.50 | |
| spar040-060-3.mat: | 2.52 | 2.58 | 7.08 | |
| spar040-070-1.mat: | 40.09 | 26.92 | 17.35 | |
| spar040-070-2.mat: | 38.33 | 25.11 | 9.16 | |
| spar040-070-3.mat: | 22.51 | 18.62 | 23.72 | |
| spar040-080-1.mat: | 138.15 | 76.38 | 8.36 | |
| spar040-080-2.mat: | 99.16 | 45.94 | 9.58 | |
| spar040-080-3.mat: | 23.65 | 20.75 | 26.01 | |
| spar040-090-1.mat: | 91.32 | 57.78 | 20.97 | |
| spar040-090-2.mat: | 116.04 | 54.22 | 17.12 | |
| spar040-090-3.mat: | 41.46 | 28.64 | 8.53 | |
| spar040-100-1.mat: | 50.87 | 39.40 | 20.43 | |
| $spar 0 40 \hbox{-} 100 \hbox{-} 2. mat:$ | 437.04 | 165.99 | 36.40 | |

Table 4: Solution time in seconds for BoxQP instances.

5. Raw Data for Figure 5: Cuter, Globallib and RandQP instances

| | Solution Time (s) | | | |
|---------------------|-------------------|------------|-------|-------|
| general QP instance | quadprogIP | quadprogBB | CPLEX | BARON |
| biggsc4.mat: | 6.27 | 5.02 | 3.74 | 0.18 |

... continued.

| continued. | Solution Time (s) | | | | |
|---------------------------------------|-------------------|---------------------|----------------|---------------------|--|
| | | Solution 1 im | | | |
| general QP instance | quadprogIP | quadprogBB | CPLEX | BARON | |
| dualc2.mat: | 2.68 | 20.33 | 0.01 | 0.02 | |
| hatfldh.mat: | 6.22 | 2.47 | 3.52 | 0.17 | |
| hs044.mat: | 3.71 | 1.74 | 2.02 | 0.10 | |
| hs44new.mat: | 4.63 | 1.14 | 2.22 | 0.08 | |
| qudlin.mat: | 0.20 | 1.78 | 0.00 | 0.01 | |
| $ex2_1_1.mat$: | 0.32 | 13.49 | 0.12 | 0.20 | |
| $ex2_1_10.mat:$ | 0.50 | 5.22 | 0.28 | 0.22 | |
| $ex2_1_2.mat$: | 0.19 | 0.45 | 0.00 | 0.04 | |
| $ex2_1_3.mat$: | 0.30 | 2.56 | 0.59 | 1.02 | |
| ex2_1_4.mat: | 0.19 | 0.48 | 0.01 | 1.13 | |
| ex2_1_5.mat: | 0.20 | 2.42 | 0.37 | 0.12 | |
| $ex2_1_6.mat:$ $ex2_1_7.mat:$ | 0.29 8.15 | 21.08 180.66 | $0.33 \\ 0.49$ | 0.32 1.46 | |
| $ex2_{-1}$.mat. $ex2_{-1}$.8.mat: | 0.43 | 641.43 | 0.49 | 0.70 | |
| $ex2_{-1}$ -8.mat: $ex2_{-1}$ -9.mat: | 0.43 | 1.06 | 0.20 0.42 | 4.75 | |
| nemhaus.mat: | 0.19 | 0.37 | 0.00 | 0.02 | |
| gp1.mat: | 12.18 | 29.17 | 0.01 | - 0.02 | |
| qp2.mat: | 13.18 | 28.84 | 0.02 | _ | |
| st_bpaf1a.mat: | 0.20 | 9.56 | 0.15 | 0.02 | |
| st_bpaf1b.mat: | 0.20 | 8.52 | 0.09 | 0.02 | |
| st_bpk1.mat: | 0.26 | 1.07 | 0.18 | 0.11 | |
| $st_bpk2.mat:$ | 0.29 | 1.04 | 0.40 | 0.10 | |
| $st_bpv2.mat:$ | 0.20 | 0.90 | 0.23 | 0.03 | |
| $st_bsj2.mat:$ | 0.46 | 0.93 | 0.10 | 0.12 | |
| $st_bsj3.mat:$ | 0.20 | 0.91 | 0.00 | 0.02 | |
| $st_bsj4.mat:$ | 0.26 | 6.71 | 0.21 | 0.28 | |
| $st_e22.mat:$ | 0.30 | 0.89 | 0.27 | 0.06 | |
| $st_e23.mat:$ | 0.20 | 0.93 | 0.27 | 0.01 | |
| $st_e24.mat:$ | 0.20 | 1.00 | 0.24 | 0.06 | |
| $st_e25.mat$: | 0.34 | 1.02 | 0.22 | 0.02 | |
| st_e26.mat: | 0.20 | 0.77 | 0.11 | 0.03 | |
| st_fp1.mat: | 0.40 | 12.08 | 0.14 | 0.18 | |
| st_fp2.mat: | 0.20 | 0.43 | 0.00 | 0.04 | |
| $st_fp3.mat:$ $st_fp4.mat:$ | $0.41 \\ 0.28$ | 2.39 2.81 | $0.11 \\ 0.01$ | $\frac{1.02}{1.12}$ | |
| $st_{-}fp5.mat:$ | 0.20 | $\frac{2.61}{2.44}$ | 0.01 | 0.12 | |
| $st_{-}fp6.mat:$ | 0.20 | 21.16 | 0.20 0.12 | 0.12 0.32 | |
| st_fp7a.mat: | 4.10 | 38.15 | 0.12 | 0.69 | |
| st_fp7b.mat: | 5.44 | 33.52 | 0.44 | 0.69 | |
| st_fp7c.mat: | 5.11 | 35.47 | 0.22 | 0.72 | |
| $st_{p7d.mat}$: | 3.92 | 35.98 | 0.23 | 0.69 | |
| $st_fp7e.mat:$ | 8.02 | 181.19 | 0.45 | 1.45 | |
| qp3.mat: | 153.32 | - | - | - | |
| st_glmp_fp1.mat: | 0.22 | 2.77 | 0.22 | 0.08 | |
| $st_glmp_fp2.mat:$ | 0.20 | 2.99 | 0.15 | 0.13 | |
| $st_glmp_fp3.mat:$ | 0.25 | 1.32 | 0.04 | 0.11 | |
| $st_glmp_kk90.mat$: | 0.20 | 1.21 | 0.24 | - | |
| $st_glmp_kk92.mat$: | 0.26 | 2.48 | 0.03 | 0.13 | |
| $st_glmp_kky.mat:$ | 0.20 | 1.78 | 0.30 | 0.06 | |
| $st_glmp_ss1.mat$: | 0.20 | 1.85 | 0.25 | 0.10 | |
| $st_glmp_ss2.mat:$ | 0.20 | 1.41 | 0.20 | 0.10 | |
| st_ht.mat: | 0.27 | 2.83 | 0.27 | 0.06 | |
| st_iqpbk1.mat: | 0.34 | 1.90 | 0.58 | 0.14 | |
| st_iqpbk2.mat: | 0.27 | 1.88 | 0.50 | 0.14 | |
| $st_jcbpaf2.mat:$ | 0.38 | 140.91 | 0.25 | 0.03 | |

$\underline{\quad \dots }$ continued.

| | Solution Time (s) | | | |
|--------------------------------------|-------------------|----------------|---------------------|----------------------|
| general QP instance | quadprogIP | quadprogBB | CPLEX | BARON |
| st_jcbpafex.mat: | 0.20 | 0.92 | 0.36 | 0.01 |
| $st_kr.mat:$ | 0.28 | 0.81 | 0.09 | 0.07 |
| $st_m1.mat:$ | 0.88 | 4.65 | 0.68 | 0.49 |
| $st_m2.mat:$ | 12.50 | 9.34 | 0.64 | 1.25 |
| $st_pan1.mat:$ | 0.28 | 1.89 | 0.12 | 0.08 |
| st_pan2.mat: | 0.32 | 12.24 | 0.23 | 0.19 |
| st_ph1.mat: | 0.30 | 1.18 | 0.20 | 0.12 |
| st_ph10.mat: | 0.19 | 0.32 | 0.00 | 0.17 |
| st_ph11.mat: | 0.59 | 4.44 | $0.10 \\ 0.10$ | 0.06 |
| $st_ph12.mat:$ $st_ph13.mat:$ | $0.38 \\ 0.30$ | $4.58 \\ 3.83$ | 0.10 0.09 | $0.06 \\ 0.06$ |
| $st_ph13.mat$: $st_ph14.mat$: | 0.30 | 1.30 | 0.09 0.21 | 0.06 |
| $st_ph14.mat:$ $st_ph15.mat:$ | 0.24 | 0.97 | 0.21 | 0.12 |
| st_ph2.mat: | 0.27 | 1.20 | 0.12 | 0.10 |
| stph20.mat: | 0.31 | 0.95 | 0.10 | 0.07 |
| st_ph3.mat: | 0.28 | 0.99 | 0.09 | 0.08 |
| st_phex.mat: | 0.26 | 0.81 | 0.09 | 0.07 |
| st_qpc_m0.mat: | 0.25 | 0.69 | 0.07 | 0.06 |
| $st_qpc_m1.mat$: | 0.31 | 0.89 | 0.02 | 0.03 |
| $st_qpc_m3a.mat$: | 0.29 | 1.83 | 0.02 | 0.04 |
| $st_qpc_m3b.mat$: | 0.25 | 1.85 | 0.03 | 0.04 |
| $st_qpc_m3c.mat$: | 0.19 | 0.65 | 0.00 | 0.04 |
| $st_qpc_m4.mat:$ | 0.19 | 0.65 | 0.00 | 0.08 |
| $st_qpk1.mat:$ | 0.30 | 0.76 | 0.24 | 0.02 |
| $st_qpk2.mat:$ | 0.34 | 28.85 | 0.39 | 0.28 |
| $st_qpk3.mat:$ | 0.42 | 103.81 | 0.30 | 0.77 |
| st_rv1.mat: | 0.28 | 1.50 | 0.58 | 0.31 |
| st_rv2.mat: | 0.56 | 2.65 | 0.40 | 0.61 |
| st_rv3.mat: st_rv7.mat: | 4.68 17.06 | 44.24 57.51 | $0.41 \\ 0.67$ | $0.88 \\ 0.62$ |
| st_rv8.mat: | 36.99 | 1703.08 | 0.66 | 0.02 |
| st_rv9.mat: | 125.21 | 5091.61 | 7.61 | 4.26 |
| st_z.mat: | 2.99 | 0.90 | 5.16 | 0.82 |
| stat.mat: | 4.54 | 0.86 | 5.71 | 0.12 |
| qp20_10_1_1.mat: | 0.61 | 415.55 | 0.03 | 0.42 |
| qp20_10_1_2.mat: | 0.65 | 103.57 | 0.50 | 5.36 |
| qp20_10_1_3.mat: | 1.54 | 152.00 | 0.63 | 0.66 |
| $qp20_{-}10_{-}1_{-}4.mat:$ | 8.26 | 1158.68 | 0.32 | - |
| $qp20_{-}10_{-}2_{-}1.mat$: | 0.39 | 227.23 | 0.22 | 1.17 |
| $qp20_10_2.mat:$ | 1.68 | 64.40 | 1.47 | - |
| $qp20_10_2.3.mat:$ | 0.66 | 19.04 | 0.59 | 253.70 |
| qp20_10_2_4.mat: | 0.52 | 22.18 | 0.73 | _ |
| qp20_10_3_1.mat: | 0.51 | 70.41 | 0.36 | 1.88 |
| qp20_10_3_2.mat: | 0.59 | 134.75 | 0.45 | 3.41 |
| qp20_10_3_3.mat: | 4.21 | 351.26 | 0.41 | 9.49 |
| qp20_10_3_4.mat: | 4.36 | 191.32 | 0.37 | 1.29 |
| qp20_10_4_1.mat: | 0.39 | 228.44 | 0.45 | 27.74 |
| qp20_10_4_2.mat: qp20_10_4_3.mat: | $0.66 \\ 0.56$ | 15.60 156.68 | $0.16 \\ 0.52$ | 5.92 |
| qp20_10_4_3.mat: qp20_10_4_4.mat: | 4.88 | 26.48 | $\frac{0.52}{1.09}$ | $\frac{5.92}{10.16}$ |
| qp30_15_1_1.mat: | 0.67 | 87.55 | 0.01 | 0.04 |
| qp30_15_1_2.mat: | 1513.83 | 1298.48 | 0.01 0.42 | 2.16 |
| qp30_15_1_3.mat: | 19.52 | 36.63 | 1.04 | 0 |
| qp30_15_1_4.mat: | 1.13 | 33.63 | 0.14 | 0.51 |
| qp30_15_2_1.mat: | 0.23 | 125.32 | 0.78 | 3.14 |
| | | | | |

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| continued. | Solution Time (s) | | | |
|---------------------|-------------------|------------|---------|---------|
| general QP instance | quadprogIP | quadprogBB | CPLEX | BARON |
| qp30_15_2_2.mat: | 1959.20 | 6828.69 | 1.59 | 30.33 |
| qp30_15_2_3.mat: | 10.25 | 1770.61 | 0.98 | 58.28 |
| gp30_15_2_4.mat: | 6.78 | 468.55 | 0.62 | _ |
| qp30_15_3_1.mat: | 17.55 | 1615.60 | 1.90 | 53.50 |
| qp30_15_3_2.mat: | 0.54 | 336.85 | 1.11 | 10.71 |
| qp30_15_3_3.mat: | 40.91 | 64.50 | 0.37 | _ |
| qp30_15_3_4.mat: | 0.88 | 38.90 | 0.66 | 25.66 |
| qp30_15_4_1.mat: | 0.88 | 70.55 | 0.27 | _ |
| qp30_15_4_2.mat: | 44.22 | 538.13 | 2.15 | _ |
| qp30_15_4_3.mat: | 1.04 | 143.37 | 3.07 | 151.10 |
| qp30_15_4_4.mat: | 0.50 | 457.69 | 2.84 | 14.74 |
| qp40_20_1_1.mat: | 3142.93 | 861.48 | 0.89 | _ |
| qp40_20_1_2.mat: | 180.47 | 2670.98 | 0.98 | _ |
| qp40_20_1_3.mat: | 10.24 | 1253.12 | 0.72 | _ |
| qp40_20_1_4.mat: | 1.46 | 276.53 | 1.29 | 28.54 |
| qp40_20_2_1.mat: | 0.69 | 1549.65 | 0.43 | 31.20 |
| gp40_20_2_2.mat: | 3633.05 | 1244.08 | 1203.98 | _ |
| gp40_20_2_3.mat: | _ | _ | 2.13 | 765.34 |
| qp40_20_2_4.mat: | 520.74 | 1732.09 | 0.02 | 0.09 |
| qp40_20_3_1.mat: | 23.93 | 4708.43 | 2.11 | 218.51 |
| qp40_20_3_2.mat: | 302.53 | 155.67 | 46.14 | _ |
| gp40_20_3_3.mat: | 0.69 | 246.62 | 3.92 | 191.57 |
| qp40_20_3_4.mat: | 15.37 | 799.86 | 3.78 | _ |
| qp40_20_4_1.mat: | 6251.25 | 1108.91 | 512.91 | _ |
| qp40_20_4_2.mat: | 270.16 | 5902.29 | 9.19 | 314.23 |
| qp40_20_4_3.mat: | 142.99 | _ | 37.54 | _ |
| gp40_20_4_4.mat: | 25.63 | 542.14 | 26.25 | _ |
| qp50_25_1_1.mat: | _ | 5587.21 | 1.18 | 116.32 |
| qp50_25_1_2.mat: | 23.81 | 445.21 | 1.88 | _ |
| qp50_25_1_3.mat: | _ | _ | 20.25 | _ |
| qp50_25_1_4.mat: | 1.41 | 1823.25 | 1.95 | _ |
| qp50_25_2_1.mat: | 87.23 | 9632.58 | 0.02 | 87.06 |
| qp50_25_2_2.mat: | _ | _ | 2.96 | 370.45 |
| qp50_25_2_3.mat: | 2644.62 | _ | 2.73 | _ |
| qp50_25_2_4.mat: | 1.27 | 562.60 | 1.97 | _ |
| qp50_25_3_1.mat: | _ | _ | 6.37 | 1175.22 |
| qp50_25_3_2.mat: | 0.94 | _ | 4.69 | 35.08 |
| qp50_25_3_3.mat: | _ | _ | 135.02 | - |
| qp50_25_3_4.mat: | 1.93 | 1904.46 | 24.44 | 5290.30 |
| qp50_25_4_1.mat: | 326.95 | 5926.12 | 94.98 | - |
| qp50_25_4_2.mat: | 1.36 | 2238.53 | 34.80 | 3084.81 |
| qp50_25_4_3.mat: | - | - | 88.56 | - |
| qp50_25_4_4.mat: | 0.69 | 7607.97 | 26.63 | 430.75 |

Table 5: Solution time in seconds for Cuter, Globallib and RandQP instances. Dash "-" indicates that solver was unable to solve the instance within the maximum allowed time of 10^4 s.