```
>> %compute problem in Example 5.1 II
>> [prob,para] = P_5_1_II;
>> for k=6:15
tic; fsippsolve(prob,para,k); toc;
end

diagnostic =

  struct with fields:

    yalmipversion: '20181012'
       yalmiptime: 0.2070
       solvertime: 0.0095
             info: 'Successfully solved (MOSEK)'
          problem: 0

The optimal value r^dual_k of the 6-th dual SDP relaxation (D_k) is
0.44938
The approximate minimizer computed by the 6-th dual SDP relaxation (D_k) is
[-0.51577, -0.53642]
Elapsed time is 0.993017 seconds.

diagnostic =

  struct with fields:

    yalmipversion: '20181012'
       yalmiptime: 0.2100
       solvertime: 0.0159
             info: 'Successfully solved (MOSEK)'
          problem: 0

The optimal value r^dual_k of the 7-th dual SDP relaxation (D_k) is
0.45998
The approximate minimizer computed by the 7-th dual SDP relaxation (D_k) is
[-0.5121, -0.5289]
Elapsed time is 1.406127 seconds.

diagnostic =

  struct with fields:

    yalmipversion: '20181012'
       yalmiptime: 0.2093
       solvertime: 0.0253
             info: 'Successfully solved (MOSEK)'
          problem: 0

The optimal value r^dual_k of the 8-th dual SDP relaxation (D_k) is
0.46757
The approximate minimizer computed by the 8-th dual SDP relaxation (D_k) is
[-0.50958, -0.52349]
Elapsed time is 1.975184 seconds.

diagnostic =

  struct with fields:

    yalmipversion: '20181012'
       yalmiptime: 0.1969
       solvertime: 0.0419
             info: 'Successfully solved (MOSEK)'
```

```
          problem: 0

The optimal value r^dual_k of the 9-th dual SDP relaxation (D_k) is
0.47319
The approximate minimizer computed by the 9-th dual SDP relaxation (D_k) is
[-0.50778, -0.51947]
Elapsed time is 3.121791 seconds.

diagnostic =

  struct with fields:

    yalmipversion: '20181012'
       yalmiptime: 0.1987
       solvertime: 0.0696
             info: 'Successfully solved (MOSEK)'
          problem: 0

The optimal value r^dual_k of the 10-th dual SDP relaxation (D_k) is
0.47746
The approximate minimizer computed by the 10-th dual SDP relaxation (D_k) is
[-0.50645, -0.5164]
Elapsed time is 4.474182 seconds.

diagnostic =

  struct with fields:

    yalmipversion: '20181012'
       yalmiptime: 0.1773
       solvertime: 0.1041
             info: 'Successfully solved (MOSEK)'
          problem: 0

The optimal value r^dual_k of the 11-th dual SDP relaxation (D_k) is
0.48079
The approximate minimizer computed by the 11-th dual SDP relaxation (D_k) is
[-0.50543, -0.51401]
Elapsed time is 7.057824 seconds.

diagnostic =

  struct with fields:

    yalmipversion: '20181012'
       yalmiptime: 0.1867
       solvertime: 0.2120
             info: 'Successfully solved (MOSEK)'
          problem: 0

The optimal value r^dual_k of the 12-th dual SDP relaxation (D_k) is
0.48343
The approximate minimizer computed by the 12-th dual SDP relaxation (D_k) is
[-0.50464, -0.5121]
Elapsed time is 10.683475 seconds.

diagnostic =

  struct with fields:

    yalmipversion: '20181012'
       yalmiptime: 0.1852
```

```
       solvertime: 0.9080
             info: 'Successfully solved (MOSEK)'
          problem: 0

The optimal value r^dual_k of the 13-th dual SDP relaxation (D_k) is
0.48539
The approximate minimizer computed by the 13-th dual SDP relaxation (D_k) is
[-0.50411, -0.51064]
Elapsed time is 18.122977 seconds.

diagnostic =

  struct with fields:

    yalmipversion: '20181012'
       yalmiptime: 0.1856
       solvertime: 2.1351
             info: 'Successfully solved (MOSEK)'
          problem: 0

The optimal value r^dual_k of the 14-th dual SDP relaxation (D_k) is
0.48694
The approximate minimizer computed by the 14-th dual SDP relaxation (D_k) is
[-0.50369, -0.50948]
Elapsed time is 29.225401 seconds.

diagnostic =

  struct with fields:

    yalmipversion: '20181012'
       yalmiptime: 0.1893
       solvertime: 1.9972
             info: 'Successfully solved (MOSEK)'
          problem: 0

The optimal value r^dual_k of the 15-th dual SDP relaxation (D_k) is
0.48766
The approximate minimizer computed by the 15-th dual SDP relaxation (D_k) is
[-0.50357, -0.50888]
Elapsed time is 43.808243 seconds.
>>
```