**Description:**

MATLAB codesthat can generate simulation results and figures shown in the paper.

**Size:**

The total size of the file is 1.43 MB in RAR format.

**Player Information:**

To run the codes one needs **MATLAB** and **CVX** optimization toolbox that can be downloaded, for example, here http://cvxr.com/cvx/

**Packing List:** List of M-Files

|  |  |
| --- | --- |
| Beampattern\_Design.m & Beampattern\_Design\_SDD.m | MATLAB subroutine for designing the beampatterns. |
| main\_code.m | MATLAB code for performing optimization over Stiefel manifold. |
| check.m | MATLAB code for applying the unitary rotation to the beamspace matrix of our proposed method. |
| Performance\_Comparison.m | MATLAB code for comparing the methods tested in the journal paper by way of RMSE. |
| Resolution.m | MATLAB code for comparing the methods tested in the journal paper by way of probability of resolving two closely located sources. |
| Beampattern\_Plot.m | MATLAB code for generating the beampatterns. |

*NOTE*: main\_code.m and associated functions was written by the group of Dr. Visa Koivunen of Aalto University, and merely used here.

main\_code.m will generate the unitary matrix.

**Contact Information:**

Dept. Electrical and Computer Engineering  
9107-116 St., University of Alberta  
Edmonton, Alberta, T6G 2V4, Canada

Email: svor@ieee.org