1. To run the State-space Model by using the Gibbs Sampling method, we have to install WinBUGS first, and then call ‘matbugs.m’.

How to install WinBUGS:

1. Download WinBUGS 14 package in this website: <https://www.mrc-bsu.cam.ac.uk/software/bugs/the-bugs-project-winbugs/>
2. Click on patch for 1.4.3, and right click – ‘save as’, save this page as ‘.txt’ (maybe ‘WinBUGS14\_cumulative\_patch\_No3\_06\_08\_07\_RELEASE.txt’)
3. Move the WinBUGUS14 folder to a directory to which have write access (e.g. ‘E:\MATLAB\State-space Model\’). The purpose it that, by using ‘matbugs.m’ later, a file called 'script.txt' can be generated in the directory where ‘winbugs14.exe’ is kept.
4. Double-click ‘WinBUGS14.exe’, ‘File’ – ‘Open’: ‘WinBUGS14\_cumulative\_patch\_No3\_06\_08\_07\_RELEASE.txt’
5. And then click ‘Tools’ – ‘Decode’ – ‘Decode All’, then you finish the installation.
6. Close WinBUGS.

matbugs:

1. Download matbugs from : <https://code.google.com/archive/p/matbugs/>
2. Set path in the MATLAB: add folder ‘matbugs’ to the MATLAB search paths

In Matlab, set ‘E:\MATLAB\State-space Model\Learning Analysis\IndividualAnalysisWinBUGS’ as the Current folder.

Run ‘runanalysis.m’

Run ‘plotresults.m’

1. To run the State-space Model by using the EM method

In Matlab, set ‘E:\MATLAB\State-space Model\Learning Analysis\IndividualAnalysisEM’ as the Current folder.

Run ‘runanalysis.m’

Run ‘plotresults.m’