

Tutorial for using code and data for ‘Tomatsu_NC2023’

System requirements:

The authors made the code at Matlab (ver. R2020b) and RStudio (R ver. 4.2.3) on Windows 10 Pro (ver. 21H2).

Installation:

Installation of Matlab: <https://www.mathworks.com/help/install/>

1. Obtain a software license or trial from the MathWorks Store or your administrator.
2. Download the installer from MathWorks Downloads.
3. Run the installer. For standard installation, see Install Products Using Internet Connection. For other options, see Install Products.

Installation of R and RStudio:

1. Download and install R; Download the installer for your OS from <https://cran.r-project.org/> , and install it.
2. Download and install RStudio; Download the installer from <https://posit.co/products/open-source/rstudio/> , and install it.

Usually, the installation was done within 10 min each.

Contents list:

Data:

1. SourceData_ST2023_Fig2CD_Fig3AB_SFig1AB.xlsx
2. SourceData_ST2023_Fig4A_SFig1C.xlsx
3. SourceData_ST2023_Fig4B_SFig1D.xlsx
4. SourceData_ST2023_Fig4C_SFig1E.xlsx
5. SourceData_ST2023_Fig4D_SFig1F.xlsx
6. SourceData_ST2023_Fig5DEFG_SFig3.xlsx
7. SourceData_ST2023_Fig6AC_extension.xlsx
8. SourceData_ST2023_Fig6AC_flexion.xlsx
9. SourceData_ST2023_Fig6B_extension.xlsx
10. SourceData_ST2023_Fig6B_flexion.xlsx
11. SourceData_ST2023_SFig2B.xlsx
12. SourceData_ST2023_SFig4BCEF.xlsx
13. OT04906DR_data
14. Y0425132162_data

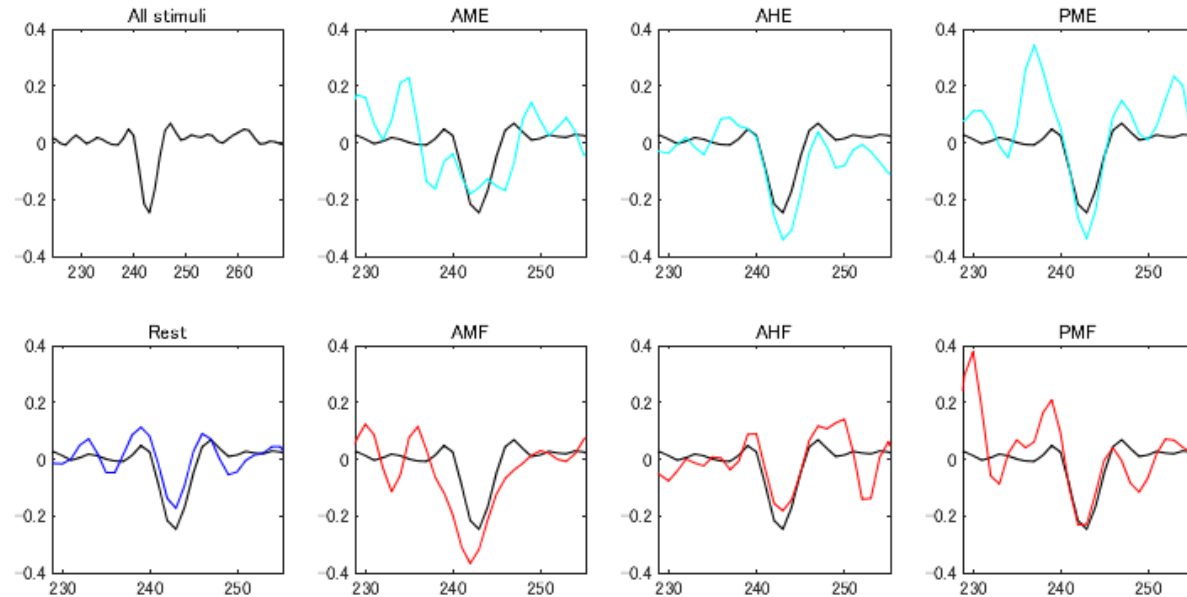
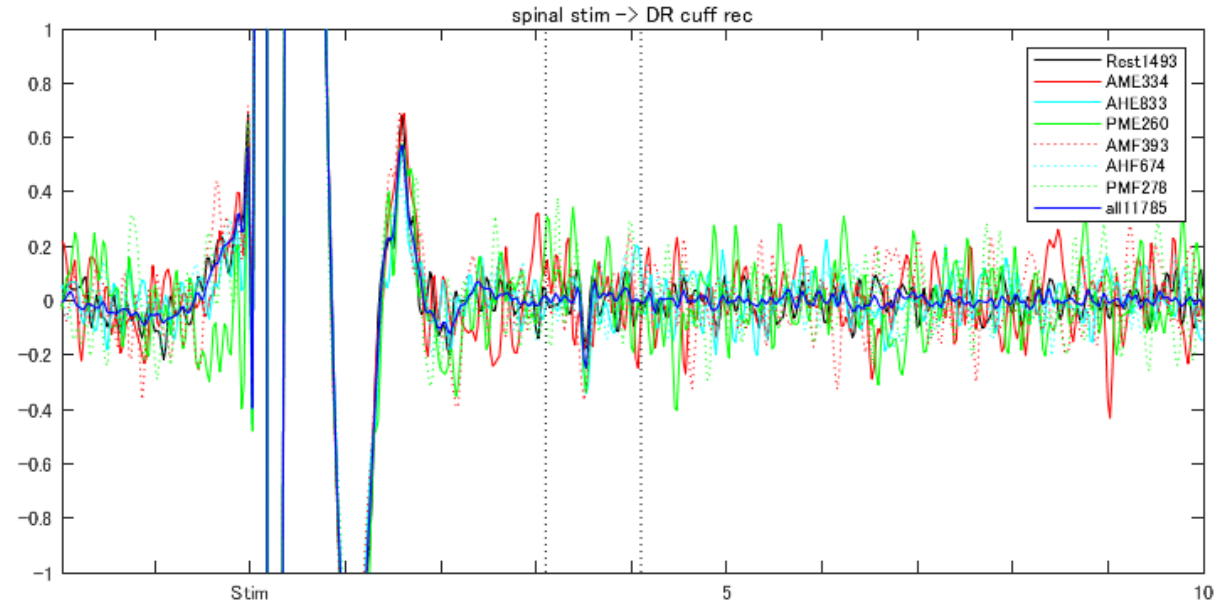
Codes:

1. Fig2b_graphic.m
2. Fig4ef.m
3. Fig2cdFig3_graphic.R
4. Fig4_Supp1cdef_graphic.R
5. Fig5_Supp3_graphic.R
6. SuppFig2.R
7. Supp4_graphic.R

The run time is within 1 min each on the normal PC.

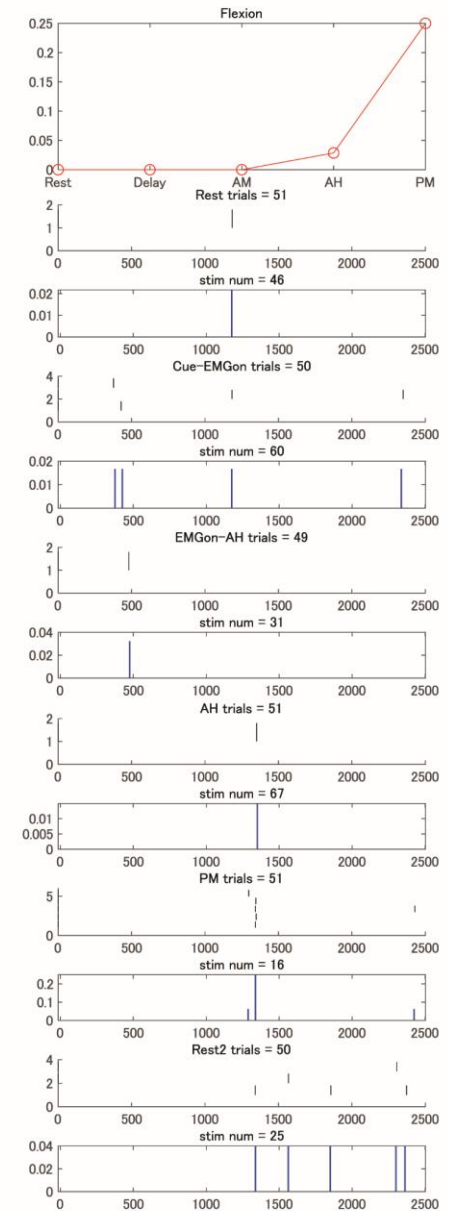
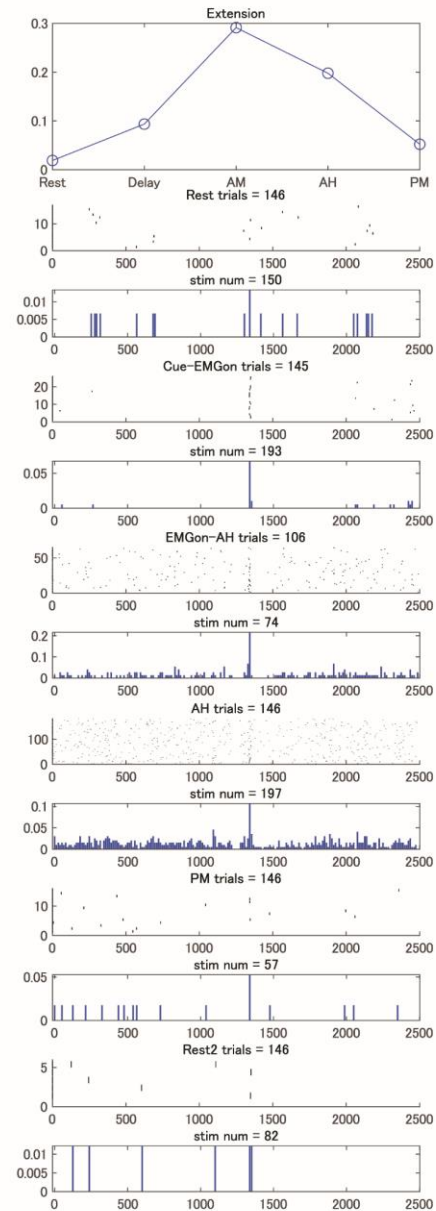
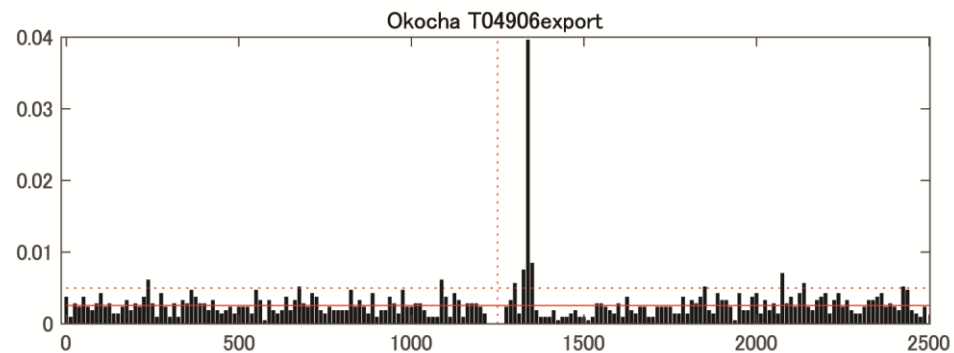
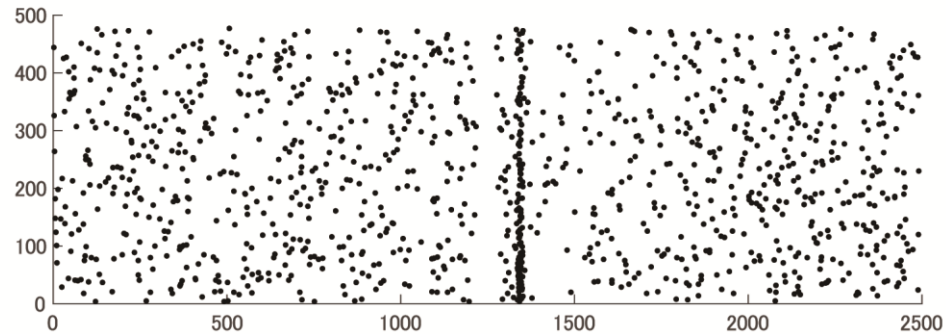
How to use codes:

1. Start Matlab.
2. Open 'Fig2b_graphic.m'.
3. Change the current directory to 'Y0425132162_data'.
4. Run the code.
5. You can get the result figure.



How to use codes:

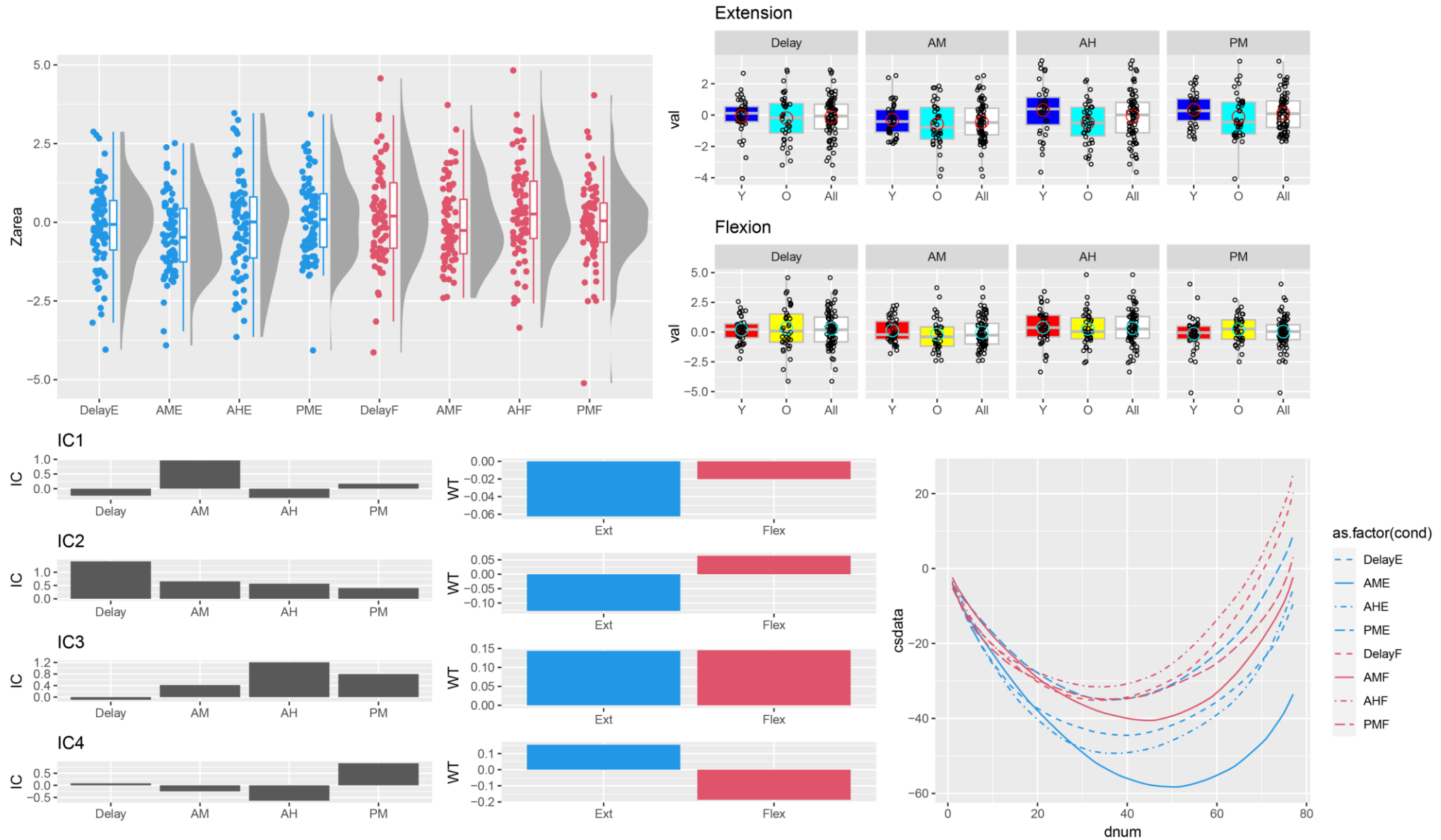
1. Start Matlab.
2. Open 'Fig4ef.m'.
3. Change the current directory to 'OT04906DR_data'.
4. Run the code.
5. You can get the result figures.



How to use codes

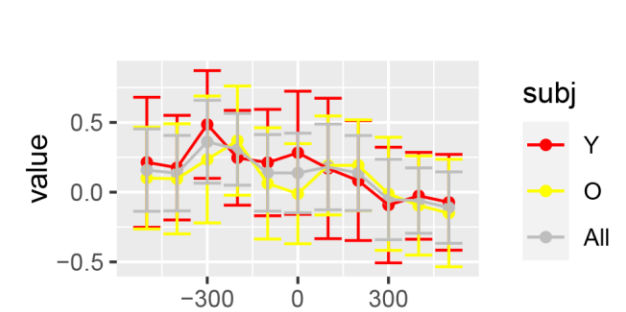
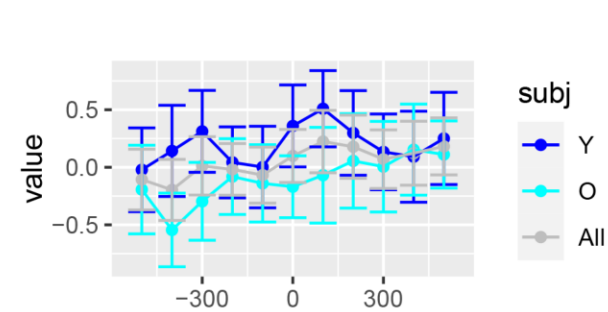
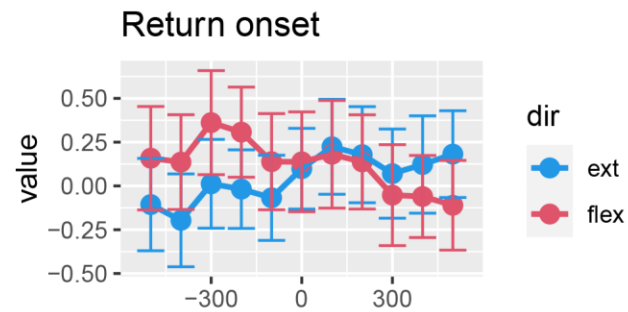
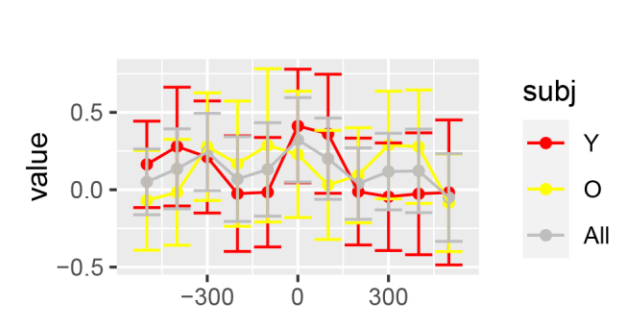
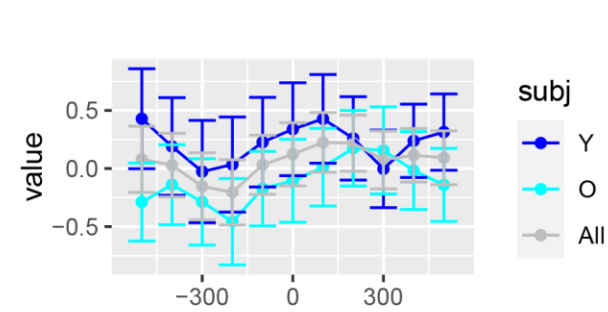
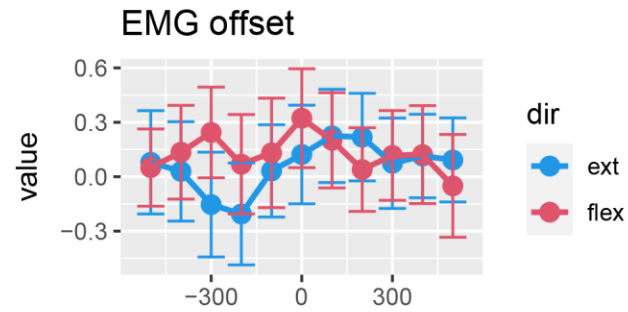
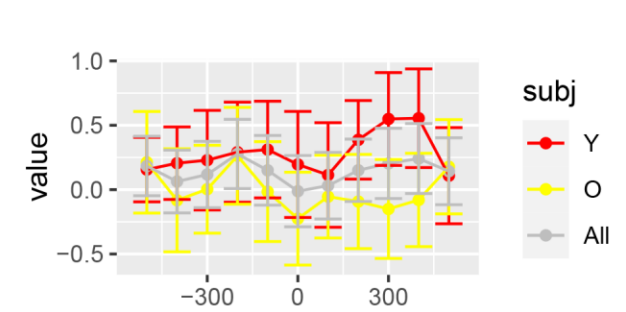
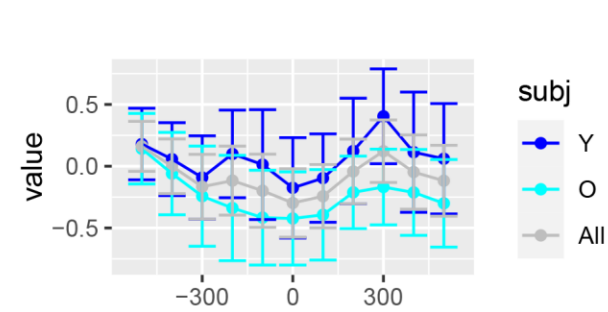
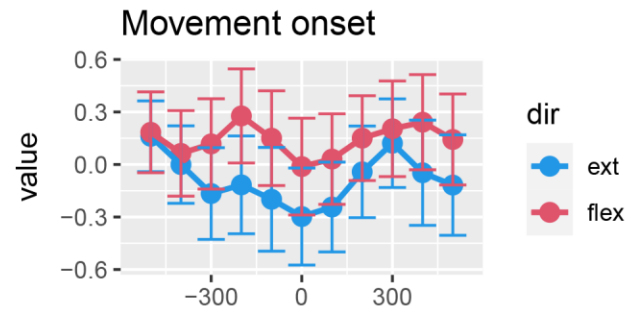
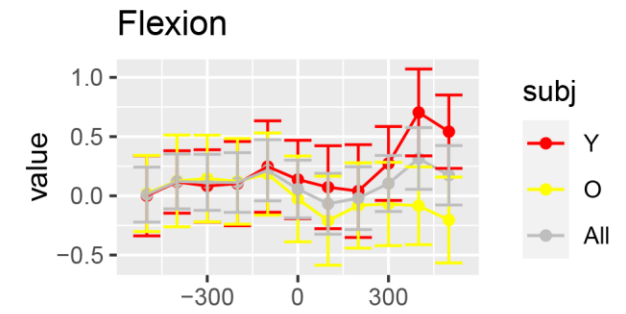
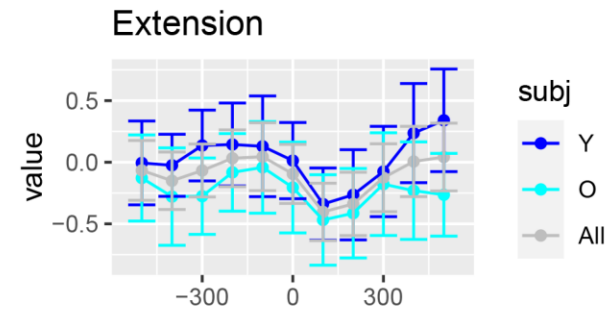
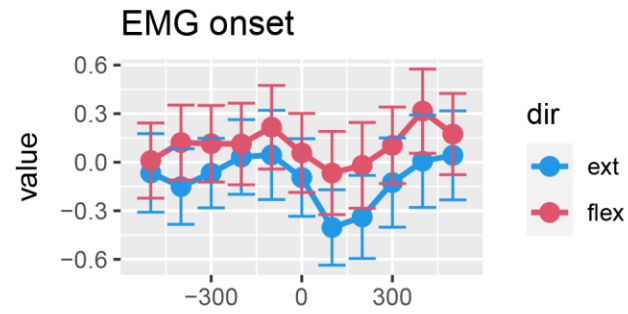
1. Start RStudio.
2. Open 'Fig2cdFig3_graphic.R'.
3. Set the path to fit your system.
4. Run the code.
5. You can get the result figure.

Note: the results of ICA were slightly changed each time.



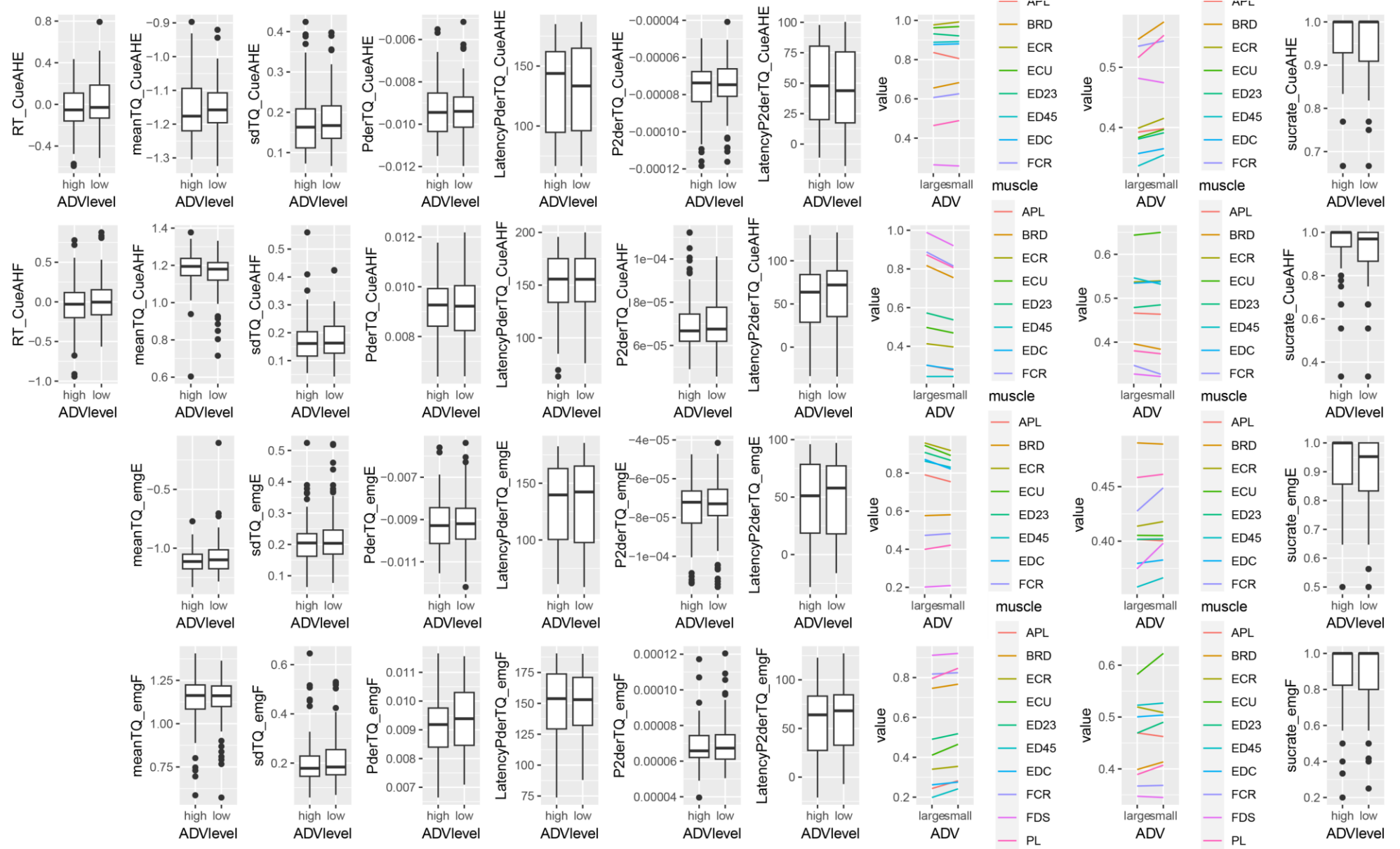
How to use codes:

1. Start RStudio.
2. Open 'Fig4_Supp1cdef_graphic.R'.
3. Set the path to fit your system.
4. Run the code.
5. You can get the result figure.



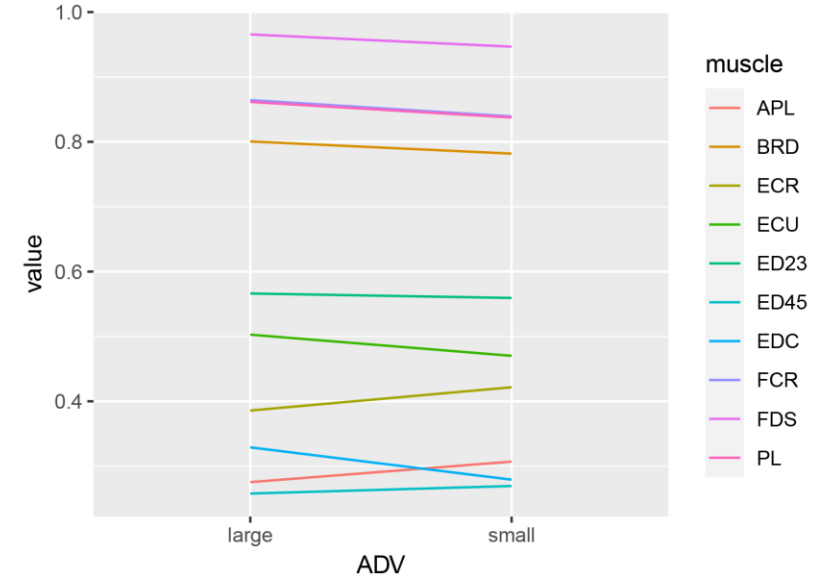
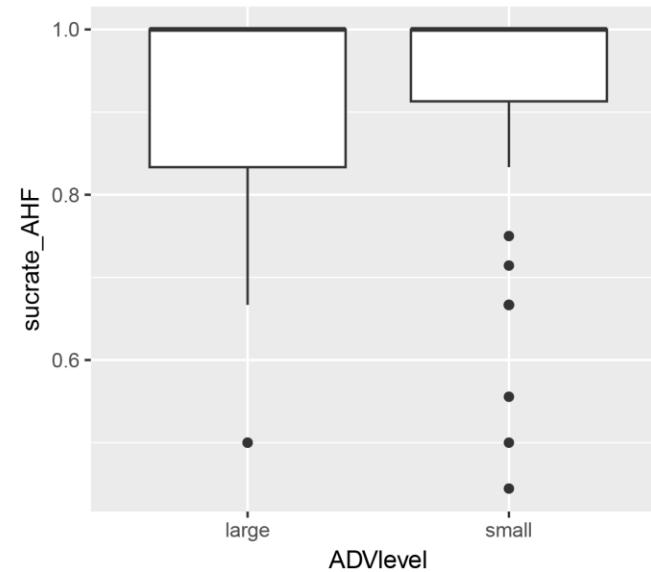
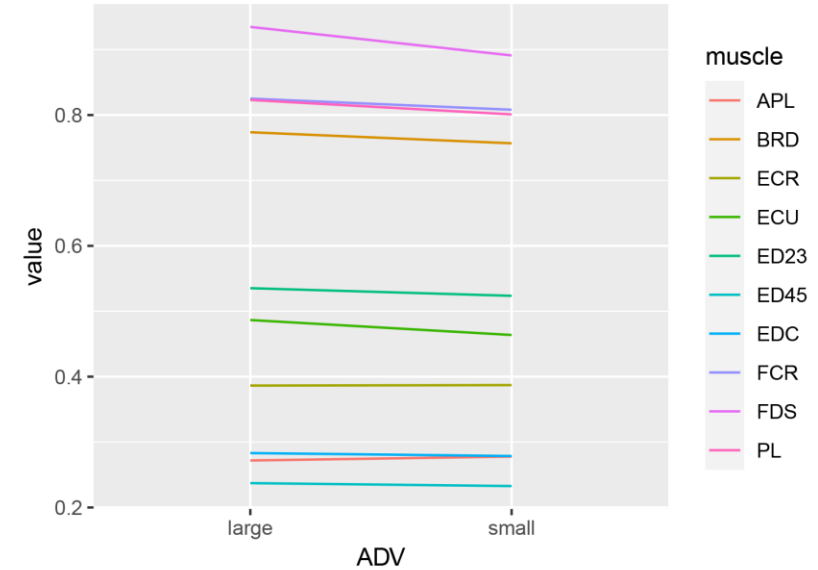
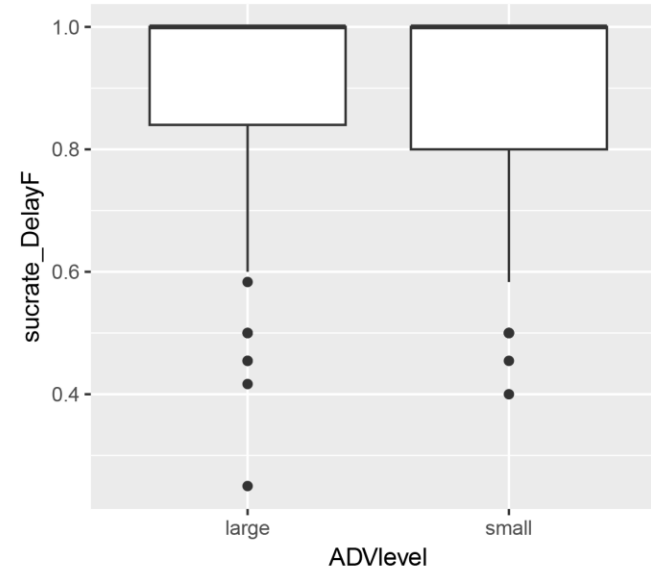
How to use codes:

1. Start RStudio.
2. Open 'Fig5_Supp3_graphic.R'.
3. Set the path to fit your system.
4. Run the code.
5. You can get the result figure.



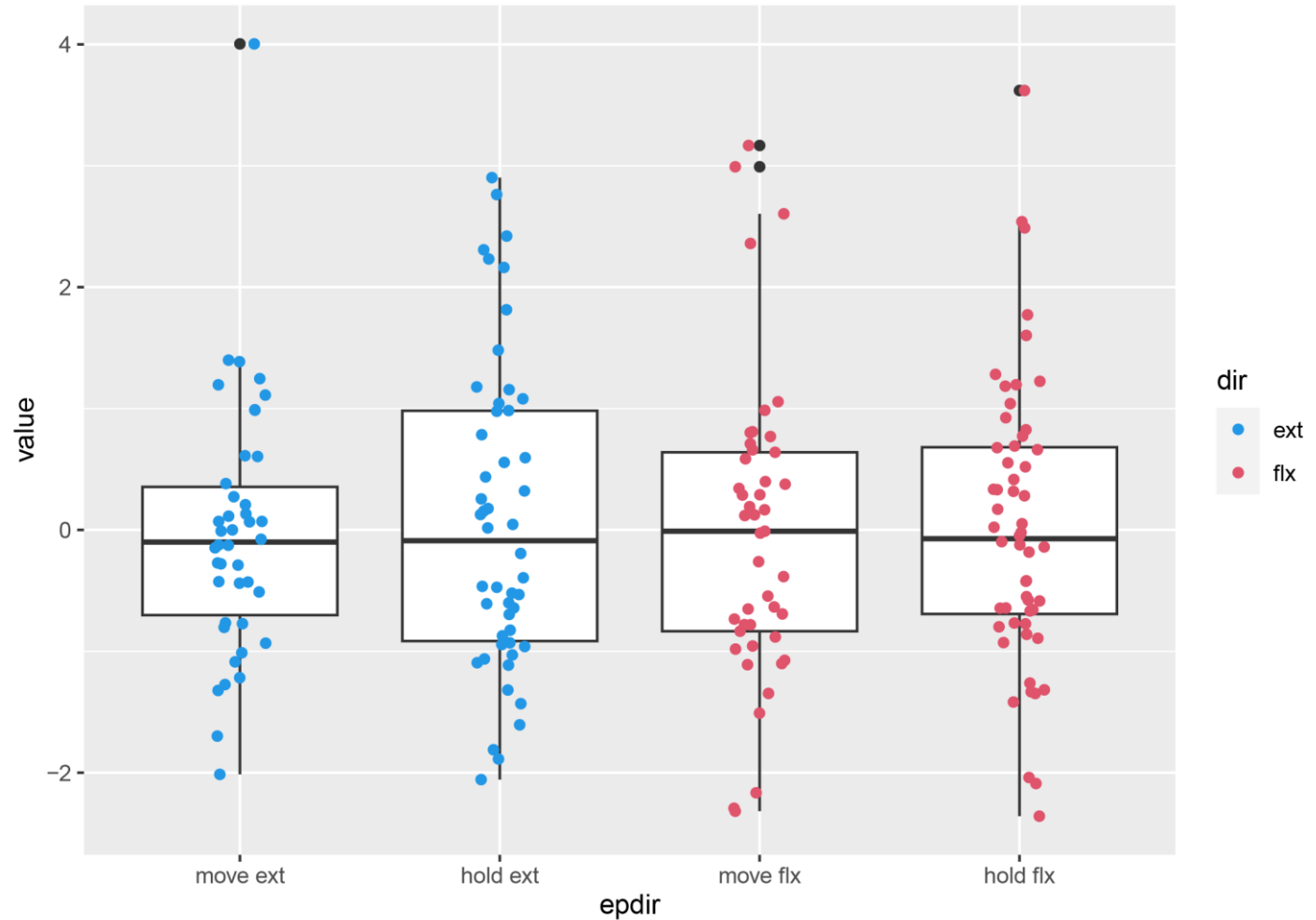
How to use codes:

1. Start RStudio.
2. Open 'Supp4_graphic.R'.
3. Set the path to fit your system.
4. Run the code.
5. You can get the result figure.



How to use codes:

1. Start RStudio.
2. Open 'SuppFig2.R'.
3. Set the path to fit your system.
4. Run the code.
5. You can get the result figure.



How to use codes:

1. Start Excel.
2. Open 'Datafile.xlsx'.
3. See the tabs 'Fig6*'.- 4. You can get the result figures.

