

Installation of required software

While all analyses and plotting routines are done by Matlab scripts, the core work of fitting the functional mixed models presented in the manuscript is done by calling R-functions from Matlab. Thus, running the Matlab scripts first requires to install the following required software packages:

1. The ‘WFMM’ standalone executable contained in the folder ‘install_wfmm/wfmm_v3_1Win64’.
2. The *wfmm* R-package, which functions as an R-interface for the WFMM executable (package source contained in ‘install_wfmm/wfmm’).

To install both of these software packages, place the folder ‘install_wfmm’ into your current R working directory; please make sure that your R working directory is not on a remote/network drive, but rather is a local directory. Then open up the R-script ‘install_wfmm/install_wfmm.R’ in an interactive R session and run/source it (we recommend sourcing the script as a whole):

- It will run the installer for the WFMM executable, which will should install further required software (.NET Framework 3.5 SP1) along with the application if necessary.
- If the executable has been successfully installed, it will install the ‘wfmm’ R-package locally from source, along with its dependencies.
- If both the WFMM executable and the wfmm R-package have been installed, it will run a test call to the core fmm() function and - if successful - will subsequently inform you that you can now run the Matlab scripts.

Requirements for installing and running these software packages (will be checked by the R installation script):

- The ‘wfmm’ R-package as well as the wfmm executable included only work under Windows OS.
- The ‘wfmm’ R-package requires a recent version of R ($\geq 3.4.1$).

‘wfmm’ R-package use / license:

- The ‘wfmm’ R-package represents a pre-release version and work in progress. In its current form, it is solely intended for the purpose of reviewing this submission. Please treat the code and any contained data as confidential and do not circulate the package or any parts thereof. See also the ‘(inst/)readme.txt’ and ‘(inst/)LICENSE’ files. At the time of publication, the package will be freely available for the general public.

In case of any errors during installation, the installation script tries to provide informative error messages. However, if there are any issues with the installation process you cannot resolve, please contact us (if possible), so we can try to fix them.