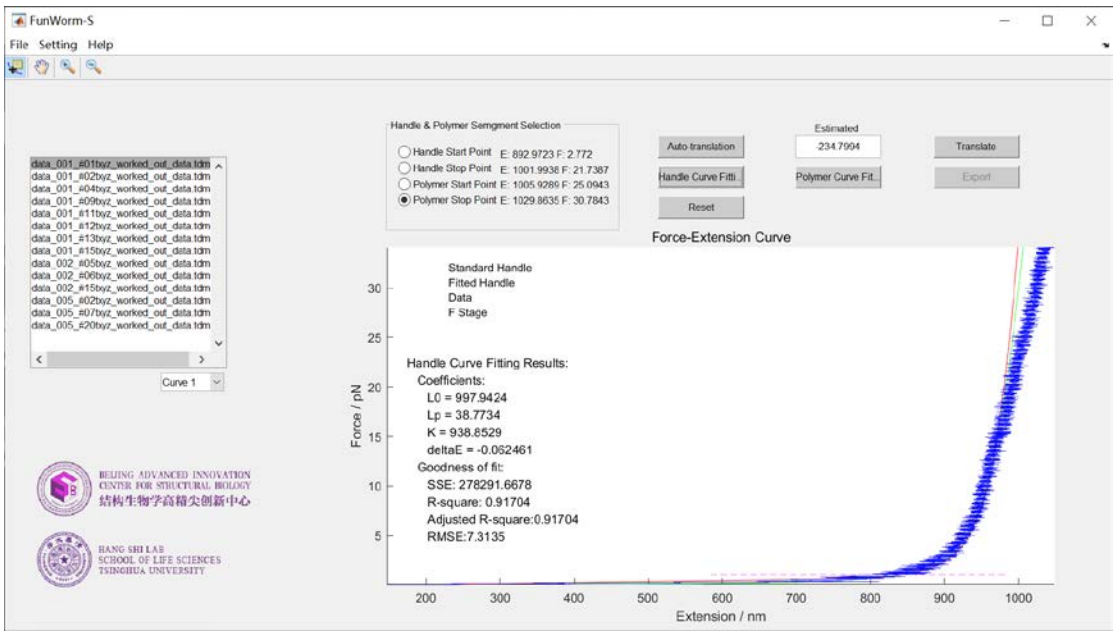
FunWorm-S User Manual

Installation：

1. Hardware recommendation: multi-core processor (AMD, Intel), memory >8G
2. Operation systems: Linux and Windows 10
3. Software requirement: MATLAB® R2019a_update6/R2019b_update1/R2020a
4. Copy AFS-S.zip to desired directory and unpack

How to use:

1. Double click MATLAB® icon to start the main program.
2. Point path to unpacked AFS-S directory.
3. Right-click **FunWorm_export.p** in the left window and then select **run** or input '**FunWorm_export**' in command window and then press Enter key.
4. Depending on the system resources, some steps may take longer time. Please be patient and do not try to click buttons multiple times.



Introduction:

File

i. Load .mat File

In the .mat File, data must be named as E (extension) and F (Force) to be loaded.

ii. Import Folder

Which can move source data folder to work directory.

iii. Select Folder

Select data directory that contains .tdms format files.

iv. Close

Close software.

Setting

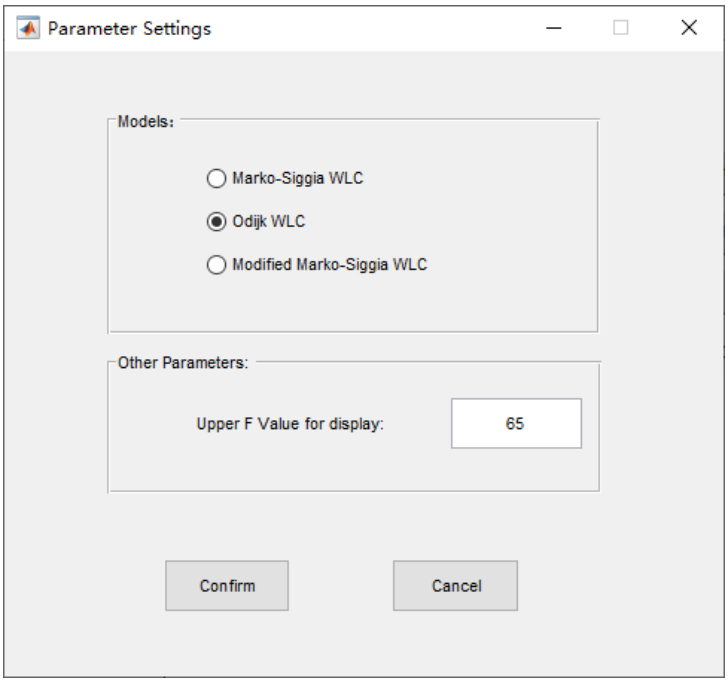
i. Parameter settings

Models

Select one of the WLC model for fitting.

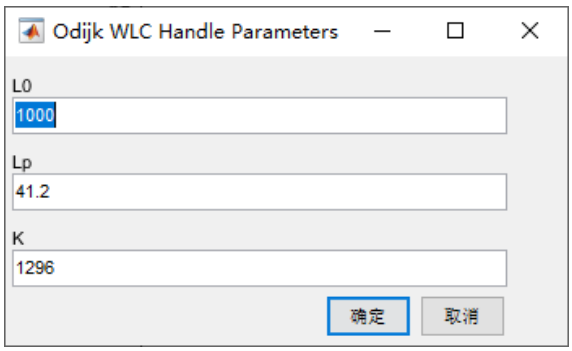
Other Parameters

Input the upper display value for F (Force) in the main window for FE curve.



ii. WLC Handle Parameters

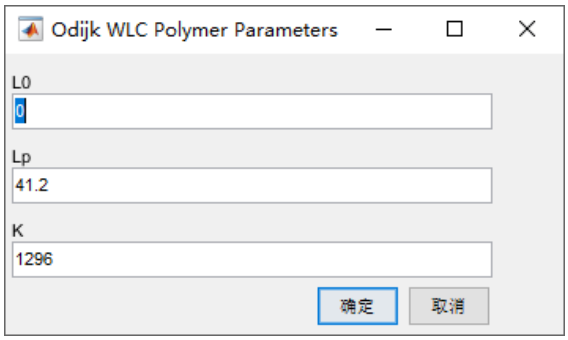
Input initial values for contour length (L0), persistence length (Lp) and stretch modulus (K) for handles correspond to each model.



iii. WLC Polymer Parameters

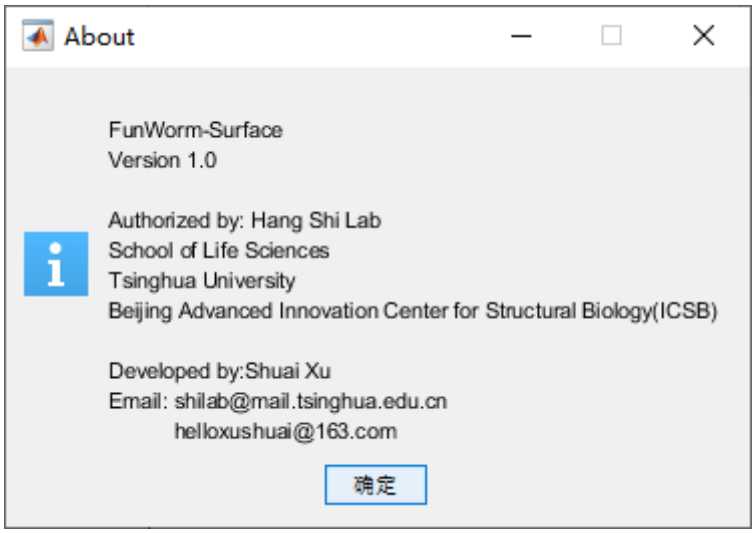
Input initial values for contour length (L0), persistence length (Lp) and stretch

modulus (K) for polymer correspond to each model.



Help

i. Contact Info



ii. Fitting procedure see demo video

Demo video will be upload soon.

iii. Export

Export raw data, displacement, initial values, fitting results, fitting statistics, theoretical WLC curve and fitted curve to generate report.