SASET (Small-Angle Scattering Evaluation Tool)

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In order to run SASET you must have MATLAB (2011b or higher) running under Microsoft Windows 7/8.

You should further have the `Optimization Toolbox` of MATLAB in order to run simultaneous fitting and to use fitting with constraints. If you have the `Parallel Computing Toolbox` of MATLAB you can increase the speed of some calculations, however it is not essential.

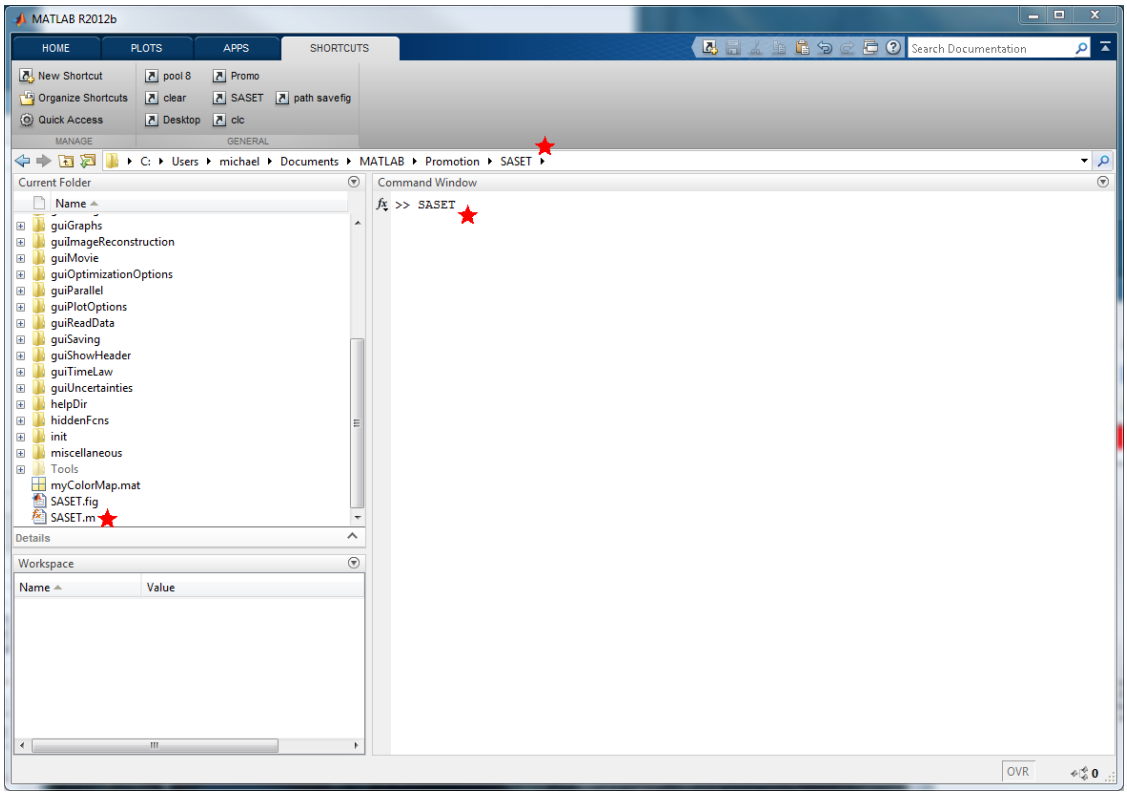
SASET is a MATLAB based program that was implemented and successfully tested under MATLAB releases 2011a-2013a on different Microsoft Windows (MS Windows Vista 7/8) versions. Unexpected GUI behaviour might occur if SASET is running on other operating systems. MATLAB programmers are asked to contribute with their knowledge and ideas to further develop SASET and to make SASET run on operating systems other from the above mentioned ones.

Note: Screens having low resolution are not appropriate for using the software. You should have at least a Full HD screen -- even better two screens with Full HD resolution.

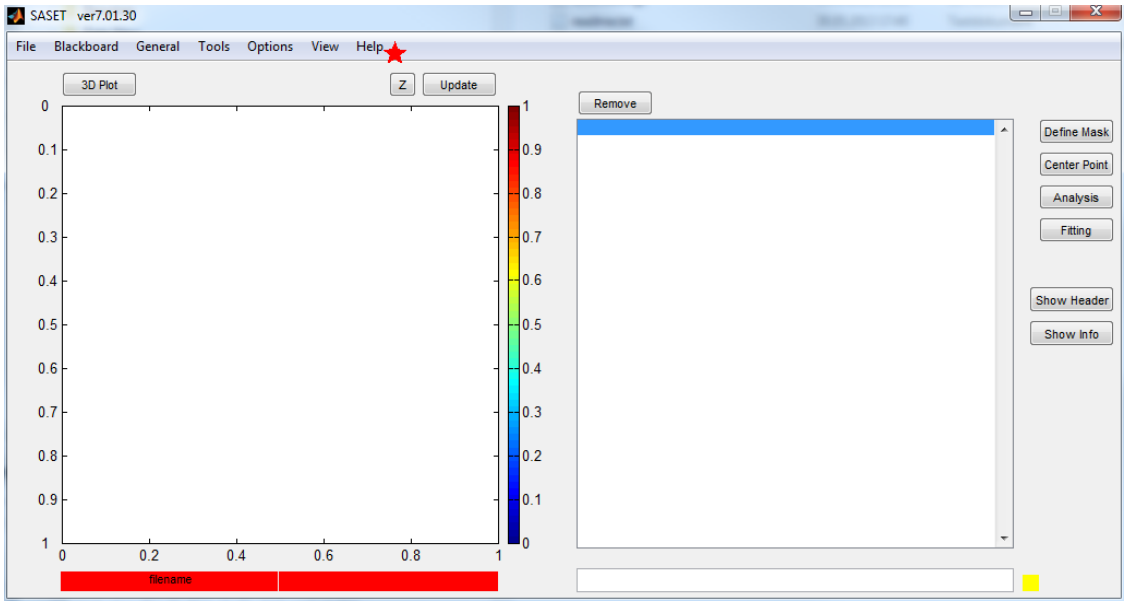
Licence Information

Starting SASET

- Extract the SASET files contained in the compressed zip-folder.
- Start MATLAB
- Change the MATLAB folder to the directory where you have extracted the SASET files.
- Type `SASET` into the command line (-> SASET will start)



- In SASET select `'Help -> SASET Help'` in order to get further information and to get access to some tutorials explaining SASET (download the sample data from the homepage for performing the tutorials).



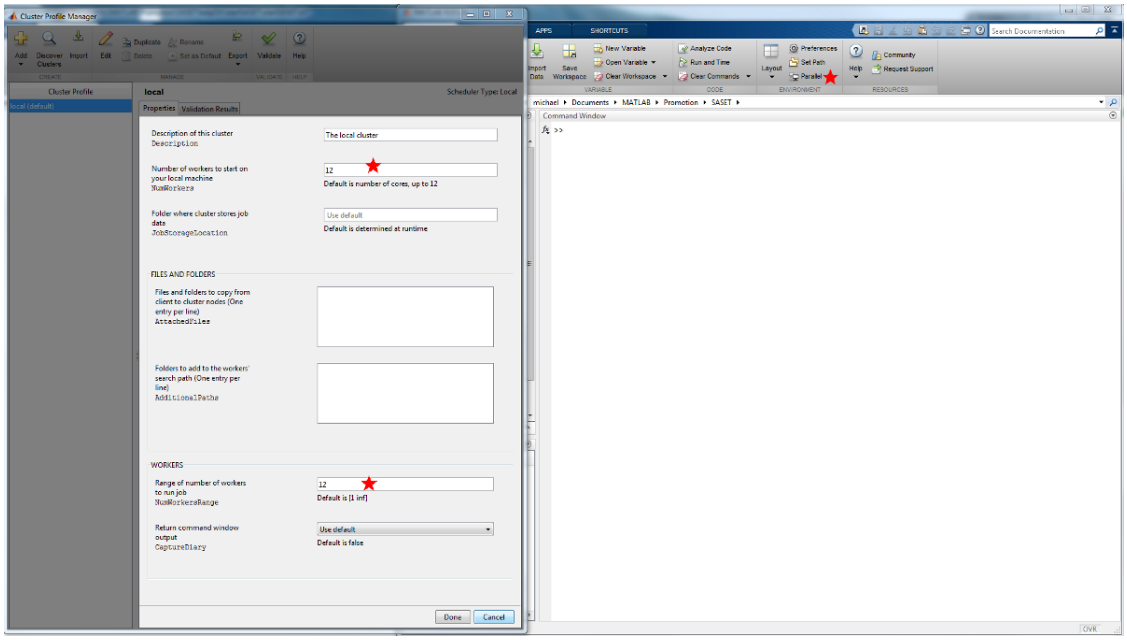
Toolboxes Checking

- The `Optimization Toolbox` is required for nonlinear curve fitting with constraints as well as for simultaneous fitting.

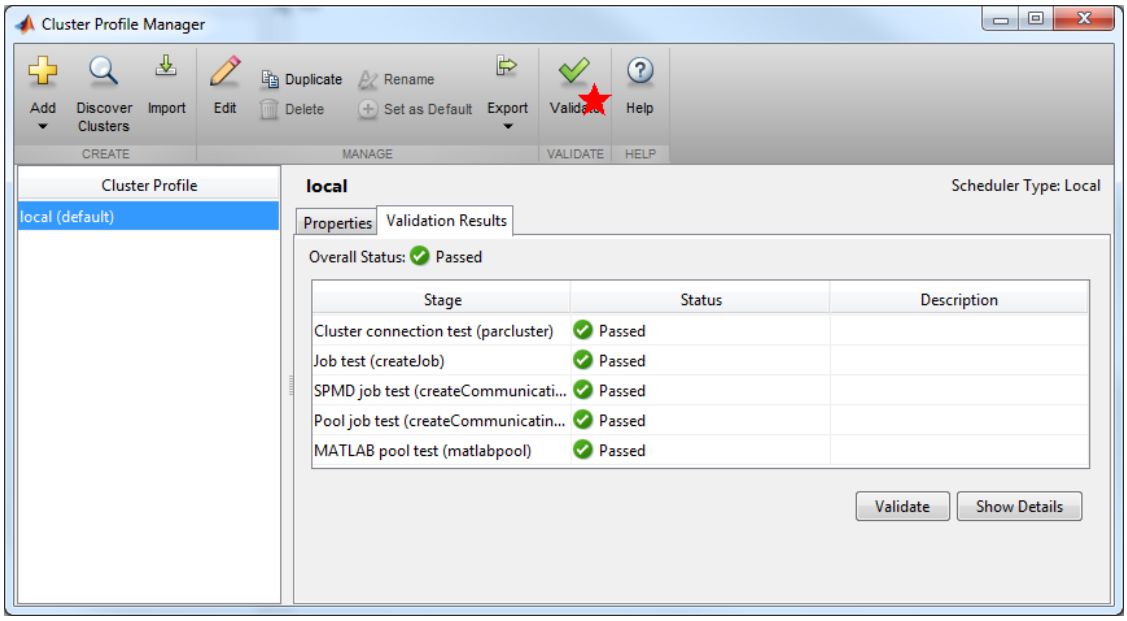
- The `Parallel Computing Toolbox` is required for code parallelization (code speed-up by calculating functions in parallel) -- if desired/needed.
- In order to see if you have the toolboxes installed and if you have a valide license for them, click in `SASET` on the menu `'Tools -> License Checking'`.
- Note that the usage of the `Parallel Computing Toolbox` only makes sense if you have many cores on your computer! At least you need two cores, but more are better.

Configuring the Parallel Computing Toolbox

- The `Parallel Computing Toolbox` may have to be configured under `'MATLAB -> HOME -> Parallel -> Manage Cluster Profiles'`, cf. Parallel Computing Toolbox.
- Example configuration: select the local profile and edit it -- enter 12 in the two editboxes or if you work with an older MATLAB (2011a-2012a) enter 8:



Afterwards click the button `'Validate'` in the `Cluster profile Manager`:



You may get problems with the a firewall (e.g. the Windows firewall). In this case allow MATLAB accessing the network. Validate again.

If the validation fails follow the instructions in the MATLAB Help of the Parallel Computing Toolbox or contact your system administrator. A computer restart might also help to solve configuration problems.

Compiled SASET (Windows Standalone Application)

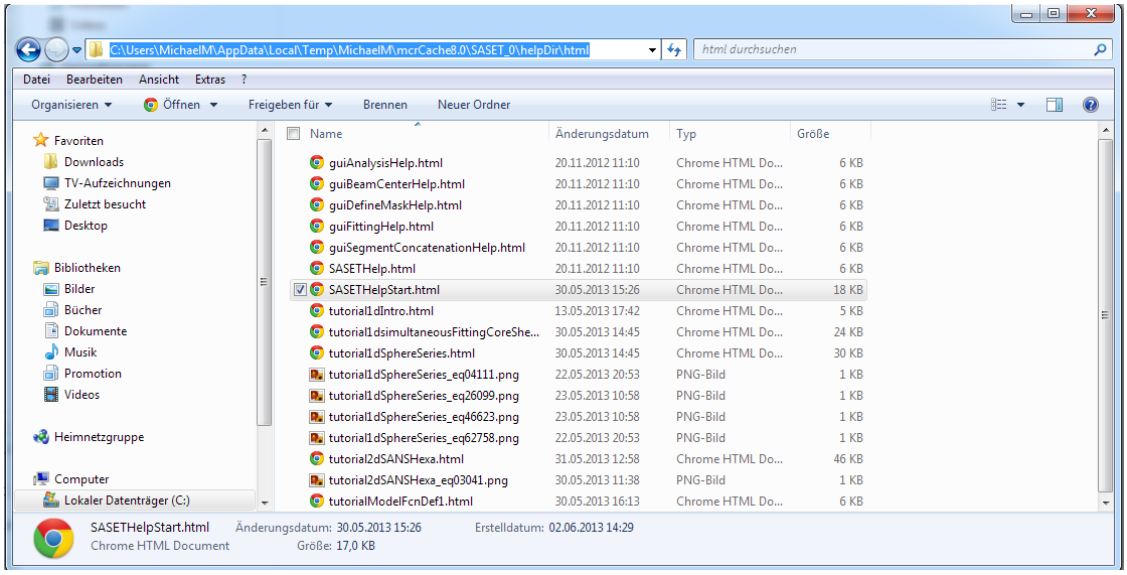
There is also a compiled version of SASET. However, this version is lacking some functionality (e.g. model function file writing not possible) and there is less support for this version (less often updates available). It is **NOT RECOMMENDED** to use the compiled SASET version. However, if you are not afraid and you want to boldly go into the deep, you may give it a trial.

1. Download and install the MCR(_R2012b_win32_installer.exe) installer package (contained in the MCR folder on the webepage). **Restart your computer** -- otherwise you may get an error if you try to run SASET.

2. Download the current compiled SASET version and extract it to a folder.

3. Run SASET.exe from the folder. **Starting may take awhile!!** First a .Net Framework will start, then the MATLAB engine is starting and then SASET will be executed (however you will not experience much activity while starting).

4. **In SASET select `'Help -> Help SASET'` in order to get further information and to get access to some tutorials explaining SASET** (download the sample data from the homepage for performing the tutorials). If you have problems accessing the help, you can open the help manually: go with the file explorer into your home folder, then into the 'AppData' folder (might be hidden, in this case just append 'AppData' in path line) and then browse further to the 'html' folder as shown below and open the file `SASETHelpStart.html`.



- Note: The help disagrees in some points with the compiled SASET version.
- Note that in the compiled version the `Optimization Toolbox` and the `Parallel Computing Toolbox` are contained.

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