

Software Introduction for pSIM

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1. System requirements

Our software is developed on Window 7 with Matlab R2016b (Mathworks^R). The performance is tested on Windows 7/8/10. A Matlab of R2016a or later version is preferred.

2. Installation guide

The installation of pSIM is following next steps:

A. Unzip the source file (downloaded from <https://github.com/chenxy2012/PSIM>)

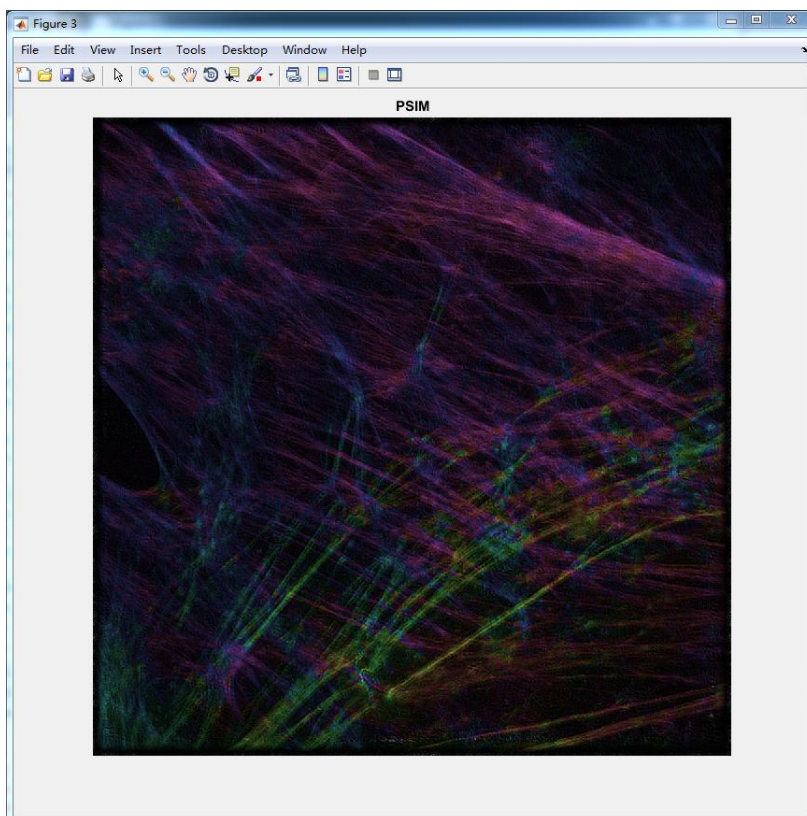
B. Change the Matlab working directory to pSIM folder

C. Run PSIM for the demo

The installation is very easy so that it does not require long time.

3. Demo

The pSIM reconstruction result is displayed in a pseudo-color mode. The image files and the color wheel file is automated saved in the “Output” folder. For a 1024*1024 SIM inputs, the running time is usually less than 1 min.



4. Instruction

The following steps should be performed for pSIM reconstruction:

- A. Put the raw SIM images in “Input” folder. The name should follow the format as “X.tif”.
- B. Put the calibration files in the “Calib” folder.
- C. Open PSIM.m in Matlab Editor Panel and input the required parameters. Detailed instruction can be seen in the code comment. The SIM parameters can be either acquired from the microscopy system or estimated by fairSIM plugin (<https://github.com/fairSIM/fairSIM>).
- D. Run PSIM.m
- E. The output result is automated saved in “Output” folder.

If there is any question, please contact chenxy16@mails.tsinghua.edu.cn.