SpinW Installation

Must have MATLAB already installed on your computer

Latest version and all releases can be found here: <u>https://github.com/spinw/SpinW</u>

Installation instructions can be found here: <u>https://spinw.org/installation/</u> or follow this tutorial

Questions/problems: yang.zhao@nist.gov

spinw.org



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Link will take you to github page with latest SpinW version *SpinW* is a MATLAB library that can plot and numerically simulate magnetic structures and excitations of given spin Hamiltonian using classical Monte Carlo simulation and linear spin wave theory.

The Projects







SpinWcore

Original SpinW written in MATLAB.

SpinW

Python implementation of SpinW

pySpinW

SpinW core functions written in C++ for speed

Installing SpinW from scratch...

 Make a folder called "spinw" in a convenient location *e.g.* the userpath folder, usually in:

Windows: %USERPROFILE%/Documents/MATLAB
Mac: \$home/Documents/MATLAB
Linux: \$home/Documents/MATLAB if \$home/Documents exists

- On github page

 (https://github.com/spinw/S pinW), navigate to the latest version
- Download the source code (zip) and extract files into the spinw folder you created

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Name	Date modified	Туре	Size
🖺 startup.m	1/5/2022 1:39 PM	MATLAB Code	1 KB
🗹 📙 spinw	1/5/2022 1:39 PM	File folder	
ResLib3.4c	11/19/2021 2:10 PM	File folder	
ResLibCal	9/8/2021 5:06 PM	File folder	

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	💱 master 👻 💱 11 Branches 🚫 10 Tags	Q Go to file	<> Code -	About
	This branch is 299 commits ahead of tsdev/spinw:master .			SpinW Matlab library for spin wave calculation
	ReardWaiteSTFC Merge pull request #208 from	m SpinW/add_new_LM_minimiser 🚥 🗸 7e87dee · 2 months	s ago 🕚 771 Commits	www.spinw.org physics matlab modeling
	tests	Add vary arg to simplex and Im4 (and tests)	2 months ago	physics-simulation symmetry spinwave
	🖿 .g <mark>i</mark> ub/workflows	Fix path in build_pyspinw.yml causing test failure	3 months ago	magnetic-structure space-group symmetry-analysis
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	🖿 dev	Text fixes for V3.1	6 years ago	مْلِهُ GPL-3.0 license
	🖿 docs	Release workflow update (#202)	4 months ago	Cite this repository -
	external	RELEASE PySpinW v4 (#190)	8 months ago	 Custom properties
	mitbx	Release workflow update (#202)	4 months ago	☆ 38 stars
	python	RELEASE PySpinW v4 (#190)	8 months ago	 5 watching 9 16 forks
	swfiles	Fix typos in se	2 months ag	Preset repository
	test_data	Test sw_egrid (#130)	ago	Releases 7
	tutorials	Add powder fitting tutorial (#199)	5 monti ago	♥ v4.0.0 (Latest)
	🗅 .gitignore	Release workflow update (#202)	4 months	on May 31, 2024
	CHANGELOG.md	RELEASE PySpinW v4 (#190)	8 months ago	+ 6 releases
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Installing SpinW from scratch...

 Open "install_spinw.m" in MATLAB and run the script. Type 'y' for all prompts. This will add the folder with the SpinW files to the startup path so your scripts using SpinW functions can always access the needed files.

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docs	1/11/2022 2:32 PM	File folder	
external	1/11/2022 2:32 PM	File folder	
swfiles	1/11/2022 2:33 PM	File folder	
tutorials	1/11/2022 2:33 PM	File folder	
gitignore	1/11/2022 2:32 PM	GITIGNORE File	1
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🗹 管 install_spinw.m	1/11/2022 2:32 PM	MATLAB Code	5
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Installing SpinW from scratch...

- Open "install_spinw.m" in MATLAB and run the script. Type 'y' for all prompts. This will add the folder with the SpinW files to the startup path so your scripts using SpinW functions can always access the needed files.
 - If the install is not successful, make sure you have a "startup.m" file is in the right place. It should be in your userpath folder. Type userpath in the MATLAB command window to see where yours is. See

https://www.mathworks.com/help/matl ab/ref/startup.html for more information

• You should be good to go now!

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📣 MATLAB R2019a				
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🗋 Name 🔺	install_spinw.m × +			
 Examples ResLib3.4c ResLibCal spinw imagefile.gif startup.m 	<pre>1</pre>			
	<pre>Command Window >> install_spinw Removing path to old SpinW installation if exists! Adding path to new SpinW installation: C:\Users\rldl\Documents\MATLAB\spinw\spinw-master! In order to reach SpinW after restarting Matlab, the following line has to be added to your startup.m file: addpath(genpath('C:\Users\rldl\Documents\MATLAB\spinw\spinw-master')); Would you like to add the following line: addpath(genpath('C:\Users\rldl\Documents\MATLAB\spinw\spinw-master')); to the end of your Matlab startup file (C:\Users\rldl\Documents\MATLAB\startup.m)? (y/n)y</pre>			

In order to refresh the internal class definitions of Matlab (to access the new SpinW version), issuing the "clear classes" command is necessary. However this command will also clear all your variables in the Matlab internal memory. Would you like the updater to issue the command now, otherwise you can do it manually later. Do you want to issue the command "clear classes" now? (y/n)y Matlab class memory is refreshed! The installation of SpinW was successful! f >> |

Test if SpinW is working correctly

- Many tutorials can be found here in the folder: ...\spinw\spinw-[version]\tutorials\publish
- Try opening 'tutorial1.m' and running it

Test if SpinW is working correctly

- For Tutorial 1, three figure windows should appear, and the command window should contain the following information
- Try some other tutorials!

