

Installation of TorchPhysics

Participants should bring their own laptop in order to easily participate in the exercise sessions. Below you find the installation instructions required for the workshop. We kindly ask you to complete the requirements before the start of the workshop.

In case of any problems, please feel free to contact us. Just send an e-mail to janek-goedeke@uni-bremen.de, tomfre@uni-bremen.de or nick7@uni-bremen.de

During the week from the 30.10. till the 3.11. we will be available for individual online meetings.

Usage during the workshop

We recommend the usage of TorchPhysics in Google Colab, mainly for two reasons:

- 1) If all participants use the same programming environment, comparisons and discussions will be simplified during the workshop.
- 2) Google Colab provides the usage of GPUs, which significantly increases the speed of training neural networks.

Requirements:

- In order to use Google Colab, it is required to create a Google account.

At the workshop there are three options to connect to WLAN: Eduroam, WLAN of the University or the City-WLAN of Heidelberg. If you use Google Colab, nothing more has to be done in advance of the workshop. Otherwise, see the alternative below.

Alternative

If you cannot create a Google account or want to use your own working environment, you can of course also install TorchPhysics on your system. Please follow the steps below:

- 1) Install Python and (Mini)Conda:
The installer files for all platforms (Windows, Linux, Mac) can be found under the link: <https://docs.conda.io/en/latest/miniconda.html>
If you get asked to add the Miniconda directory to the `PATH`, select yes.
- 2) Open a terminal or Anaconda Prompt (Windows) and create a new conda environment by running:

```
conda create --name torchphysics python=3.9
```
- 3) Activate the new environment by:

```
conda activate torchphysics
```
- 4) Before installing TorchPhysics, please install Jupyter with conda:

```
conda install -c anaconda jupyter
```
- 5) Install TorchPhysics via:

```
pip install torchphysics[all]
```

This will automatically install all other required packages, e.g. PyTorch.

Test Successful Installation

- 1) Open a terminal or Anaconda Prompt (Windows) and start JupyterLab. Just run `jupyter lab` in the terminal or Anaconda Prompt.
- 2) Download the Jupyter notebook `Installation_Test.ipynb`, which you can find under the link: https://github.com/TomF98/torchphysics/blob/KoMSO-Workshop/examples/Install-Guide/Installation_Test.ipynb
- 3) Run all cells and check whether the plot at the end of the notebook appears.

In case of any problems, please contact us.