## Installation manual

CLASS-PT uses the OpenBLAS library. We recommend to install it through anaconda. All together everything is installed and configured in 5 easy steps:

1. install OpenBLAS as

\$ conda install -c anaconda openblas

- 2. Download and unpack (or git pull) CLASS-PT
- 3. Change the paths to OpenBLAS in CLASS-PT/Makefile and in the extra\_link\_args of CLASS-PT/python/setup.py as follows:

Linux: path/to/OpenBLAS/lib/libopenblas.a

MacOS: path/to/OpenBLAS/lib/libopenblas.dylib

4. Compile CLASS as usual by typing

\$ make clean

\$ make

5. You are all set. You can run CLASS-PT and classy.

If by some reason you want to install OpenBLAS manually, you can do that as follows:

- 1. Download the OpenBLAS library from http://www.openblas.net/
- 2. Extract the library in some folder and configure the package by executing

\$ gmake CC=gcc FC=gfortran

in that folder.

## 3. Install the package via

## \$ make install PREFIX=path/to/OpenBLAS

You if choose to follow the manual installation you should keep in mind that OpenBLAS conflicts with the library Intel MKL which is used in numpy version 1.16 and higher on some machines. This incompatibility makes classy crash with "segmentation fault" even though the code can be executed with a .ini file without any errors. If this is the case on the user's computer, an easy fix is to use the numpy versions lower than 1.16.