

Installation instructions

the **install** file will

- automatically download all the required librairies (including primme) and configure them.
- configure the paths in libsources for the makefile.
- download the matrix (ia,ja,a) from <http://metronu.ulb.ac.be>

/!\ wget should be installed on your system beforehand : `apt install wget`

1. give execution permission to the file with `chmod +x install`
2. execute `./install`

There should not be anything else to do before compiling the program

Compilation

- `make`

Execution instructions

the program has to be run inside a wrapper, this wrapper will seek for the **ENTER** key to be pressed and send a **SIGTERM** signal to the c program for it to handle the *closing of the gnuplot pipe safely*

to execute program : `./wrapper`

you may need to do `chmod +x wrapper`

Change program settings

config.h has a lot of parameters to play with. Those options act as toogles for bits of code, 1 being on and 0 off.

Note for debugging with valgrind

Please disable the slepc solver part with `SOLVE_WITH_SLEPC 0`

Even the exemples provided on the slepc website make memory errors upon running inside valgrind : <https://petsc-users.mcs.anl.narkive.com/hufTDZv6/tons-of-valgrind-errors-with-simply-petscinitialize-and-petscfinalize>

Verify project matrix

To verify the matrix of this project with the one obtained from the metronu website, use `define M 3`, `define EXTRACT_MAT 1`, execute the program and then go into `compare_mat` and do `./diff_all.sh`