Armadillo's lapack wrapper vs. you

Lately I discovered that intel's MKL libraries in combination with MPI is a no-go. *mpiexec* is not an intel compiler, and does not recognize linking to *-lmkl_core* etc, which is a problem, since Armadillo depends on it. The solution, however, is intel's own MPI compilers, which is **not aviable gratis** for non-commercial use. Installing lapack on

the side did not work either, as Armadillo is configured to wrap MKL if MKL is present (not configurable through config-file).

As a result of this I had to uninstall the intel compilers, and reinstall Armadillo.

This, however, was no hassle. The hassle, however, appeared once I started linking armadillo and lapack in my netbeans editor. I am no computer genie, so I simply added the following lines to *compiler options*

-larmadillo -llapack -lblas

It didn't work. I got strange errors from the armadillo wrapper:

mpicxx -O3 -larmadillo -llapack -lblas -o …… …… …../ExpandedBasis.o

…/Fermions.o: In function `getrf<double>':
/usr/include/armadillo_bits/lapack_wrapper.hpp:42: undefined reference to `dgetrf_'

It didn't recognize the lapack linker…

In these desperate times, the computer genie Svenn-Arma Dragly helped me out by attempting to link his own monte-carlo library like netbeans did. He got exactly the same…

Solution:
lapack and Armadillo needs to be added as additional linker options under the linker tab in *project properties*. They need to appear at the end of the linker sequence, and not at the start! They do not need to be listed in compiler options at all…

Just click the [...] next to **libraries** and start adding!

Cheers!

This entry was posted in Uncategorized on 22 November, 2012 [http://comp-phys.net/2012/11/22/armadillos-lapack-wrapper-vs-you/] by Jørgen Høgberget.

About Jørgen Høgberget

Former Master student in Computational physics, University of Oslo.

Worked on an optimized Diffusion Monte-Carlo code for solving many-body systems (~100 degrees of freedom) with numerous applications.

Currently I'm on a PhD scholarship to investigate the growth of $CaCO_3$ crystals in high-pressure non-equilibrium environments (at least that's my interpretation thus far!).

Rockstar when you are asleep.

View all posts by Jørgen Høgberget →
