NemoMath - Support #1532
Using MatrixMath.h and Eigen3

06/06/2013 05:06 PM - P. Lücking

Status:	Feedback	**Start date:**	06/06/2013
Priority:	Normal	**Due date:**	
Assignee:		**% Done:**	0%
Category:		**Estimated time:**	0.00 hour
Target version:	NemoMath 0.4		

Description

Since the SVD.h available in Eigen2 is now called JacobiSVD.h and other changes (see http://eigen.tuxfamily.org/dox/classEigen_1_1JacobiSVD.html) in Eigen3 there are some problems if you want to use MatrixMath.h. Even after changing the initialization Eigen::SVD(...) to Eigen::JacobiSVD(...) in MatrixMath.h my code using the pseudoInverse function of nemo crashes at run-time, obviously because of some other changes in eigen3. Compilation without this change fails.

After going back to Eigen2 everything works fine.

eigen3 version used: libeigen3-dev 3.1.2-1
os: Ubuntu 13.04 64bit

History

#1 - 11/11/2013 04:52 PM - C. Emmerich

- Assignee set to M. Rolf

I am having the same issue with MatrixMath.h and Eigen3 and therefore push this issue a little bit :)

I have installed both libeigen2-dev and libeigen3-dev on my system.

- Using NemoMath-trunk (todays' deb package for nemomath0.5, 0.5.0-b78~precise), this issue seems to be fixed somehow, everything works fine.

- Using nemomath0.4 results in

  In file included from /usr/share/NemoMath0.4/../../include/NemoMath0.4/nemo/MatrixMath.h:8:0:
  /usr/include/eigen3/Eigen/Array:8:4: Fehler: #error The Eigen/Array header does no longer exist in Eigen3. All that functionality has moved to Eigen/Core.

- Interestingly, also using nemomath0.3 results in the same error, although nemomath0.3 depends on libeigen2-dev...

#2 - 11/29/2013 10:03 AM - Anonymous

- Status changed from New to Feedback
- Assignee changed from M. Rolf to Anonymous
- Target version set to NemoMath 0.4

It might be, that you don't include the nemomath definitions properly in your project. Please check, you should have a line like

```
add_definitions(${NEMOMATH_DEFINITIONS})
```

somewehere in your project's cmake files. This variable is case-sensitive and upper-/lower-case might have changed between nemomath 0.3 to

nemomath 0.5 (which might explain, why it is working with nemomath0.5). So please check if the variable is not empty (also try ${NemoMath_DEFINITIONS}). It should contain the eigen2 support flags.

If you don't use these definitions, eigen3 doesn't know to be in eigen2 compatibility mode, which is currently still required by nemomath.