

# C++ Matrix & Linear Algebra library

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*Source:* <http://sci.tech-archive.net/Archive/sci.math.num-analysis/2008-08/msg00180.html>

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All,

I'm trying to choose a C++ library for matrix and vector math. So far, no 'obvious choice' has come forward.

My code really amounts to a library to help its users solve a class of problems. As such, I am focused on making the construction of the matrix and rhs as easy as possible — as well as the manipulation of the results.

I would prefer to treat solving the equations at an appropriately high level. Simplicity is preferred over extreme performance, although a library which makes sparse or parallel techniques readily available would be nice.

My code will eventually be open source. However, I prefer code to politics.

I want to keep the high-level syntactic convenience of an overloaded library like blitz++. It is what I am using so far.

However, blitz doesn't actually have any of the linear algebra routines built in. I am also concerned that blitz is not progressing — the last release was in 2005 and the project appears to be incomplete rather than fully mature.

The GSL provides the kitchen sink of libraries. It is also actively developed. However, it provides none of the convenience of an overloaded library. It appears to be a flag-waving member of the GNU project, I would prefer not to use a library which chose the GPL over the LGPL.

I've looked a little at POOMA and some of the others.

The list at <http://www.oonumerics.org/oon/> provides few answers and seems quite out of date.

Does anyone have any suggestions?

Rob

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