Subject: GPULib 1.8 released
Posted by Michael Galloy on Mon, 02 Feb 2015 19:53:22 GMT
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GPULib 1.8 has been released with updates to the underlying libraries as well as many other features in many areas of the library. For information about purchasing, see:

http://www.txcorp.com/home/gpulib

It has been updated to use the most recent versions of IDL and CUDA, IDL 8.4 and CUDA 6.5. The new features are:

* Support for integer data types. I have been wanting to support integer types in GPULib for awhile and now GPULib supports all the numeric types provided by IDL! We can finally do:

```
dx = gpuIndgen(10)
```

* Added `GPUREPMAT` routine. This is a handy routine to create a new array by repeating a 2-dimensional array in a grid.

* Added `GPUCREATEKERNEL` routine to create the source code of a simple kernel. This is a code generation routine that can be loaded with `GPULOADMODULE`/`GPULOADFUNCTION` and executed with `GPUEXECUTEFUNCTION`.

* Added `GPUFINITE` routine similar to IDL's library routine.

* Added linear algebra routines `GPULUDC`, `GPULUSOL`, and `GPULEAST_SQUARES`. This fills out more of the GPU equivalent of the convenience routines provided by IDL so that the LAPACK interface of MAGMA is not required to perform linear algebra computations.

* Added support for `RHO` and `THETA` keywords in `GPURADON`.

* Added `GPUMEAN` routine. This routine has `DIMENSION` and `NAN` keywords with the same functionality as IDL's library routine.

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