

There are efforts at Lawrence Livermore National Laboratory (LLNL) to study the effects of ideally mapping a problem onto the BG/Q communication torus that might be useful for the attendees in the ATPESC2014 class.

STATE (Scalable Topology Aware Task Embedding):

LLNL is developing a library called 'CHIZU' that can generate a mapping for an application onto a machine's underlying network topology to minimize hops and congestion. It's still in 'alpha' state, with plans to upload the source code to github. Permission has been provided by the principal investigator, Abhinav Bhatele (bhatele1@llnl.gov) to upload the poster `deveci-llnl-student-poster.pdf`

to <http://extremecomputingtraining.anl.gov/additional-program-materials/>

RUBIK:

"Rubik allows an application developer to specify communicating groups of processes in a virtual application topology succinctly and map them onto groups of processors in a physical network topology."

This library is open source and available on github.

http://courses.teresco.org/cs507_s13/lectures/lect4/2012-11-15-Rubik-SC12

<https://computation-rnd.llnl.gov/performance-analysis-through-visualization/software.php>

<https://computation-rnd.llnl.gov/performance-analysis-through-visualization/software/rubik/docs/index.html>

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