**Blue Waters Petascale Semester Curriculum v1.0**

**Unit 5: MPI**

**Lesson 7: Convolution/Stencil Code in MPI**

**References / Further Reading**

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*Browse and search the full curriculum at*[*http://shodor.org/petascale/materials/semester-curriculum*](http://shodor.org/petascale/materials/semester-curriculum)

*We welcome your improvements! You can submit your proposed changes to this material and the rest of the curriculum in our GitHub repository at*[*https://github.com/shodor-education/petascale-semester-curriculum*](https://github.com/shodor-education/petascale-semester-curriculum)

*We want to hear from you! Please let us know your experiences using this material by sending email to* [*petascale@shodor.org*](mailto:petascale@shodor.org)

Stencil code in MPI:

<https://www.mcs.anl.gov/~thakur/sc16-mpi-tutorial/slides.pdf>

<https://www.coursera.org/lecture/parallelism-ia/stencil-demonstration-mpi-UhgtJ>

<http://wgropp.cs.illinois.edu/projects/software/baseenv.htm>

Gprof tutorial:

<https://www.thegeekstuff.com/2012/08/gprof-tutorial/>

MPI Basics tutorial:

<https://mpitutorial.com/tutorials/>