1 Texts

Two introductory texts to programming in CUDA C are Sanders and Kandrot [2010] and Kirk et al. [2010]. A solid resource for pure C is Kernighan and Ritchie [1988], a C++ introductory book is Savitch [2008], and an introductory Python book is Beazley [2009].

2 Papers

A number of statistical algorithms coded on a GPU [Lee et al., 2010]. Bayesian mixture models [Suchard et al., 2010]. [Marsaglia and Tsang, 2000] wrote a good Gamma rejection sampler.

3 People

3.1 @iastate.edu

- Jaroslaw Zola
- Ryan VanderPlas
- Wallapak Tavanapong

4 Online

4.1 NVIDIA

gputools `http://brainarray.mbni.med.umich.edu/Brainarray/Rgpgpu/`

Pointers in C `http://pw1.netcom.com/~tjensen/ptr/pointers.htm`

CUDA SDK `http://developer.nvidia.com/gpu-computing-sdk`

NVIDIA CUDA C Programming Guide `http://developer.download.nvidia.com/compute/DevZone/docs/html/C/doc/CUDA_C_Programming_Guide.pdf`

NVIDIA GPU-Accelerated Libraries: CUBLAS, CULA, CURAND, Thrust, etc. `http://developer.nvidia.com/cuda/gpu-accelerated-libraries`

NumPy Tutorial `http://www.scipy.org/Tentative_NumPy_Tutorial`

SciPy Tutorial `http://docs.scipy.org/doc/scipy/reference/tutorial/general.html`

MatPlotLib `http://matplotlib.org/`

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David M. Beazley. *Python Essential Reference*. Addison-Wesley, 4 edition, 2009.

Brian W. Kernighan and Dennis M. Ritchie. *The C Programming Language*. Prentice Hal, 2 edition, 1988.

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A. Lee, C. Yau, M.B. Giles, A. Doucet, and C.C. Holmes. On the utility of graphics cards to perform massively parallel simulation of advanced monte carlo methods. *Journal of Computational and Graphical Statistics*, 19(4): 769–789, 2010.

G. Marsaglia and W. Tsang. A Simple Method for Generating Gamma Variables. *ACM Transactions on Mathematical Software*, 26(3):363–372, September 2000.

J. Sanders and E. Kandrot. *CUDA by Example*. Addison-Wesley, 2010.

Walter Savitch. *Absolute C++*. Pearson, 3 edition, 2008.

M.A. Suchard, Q. Wang, C. Chan, J. Frelinger, A. Cron, and M. West. Understanding gpu programming for statistical computation: Studies in massively parallel massive mixtures. *Journal of Computational and Graphical Statistics*, 19(2):419–438, 2010.