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GPU Performnace of Conjugate Gradient Solverwith Staggered Fermions

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The progress in GPUs (graphic processing units) is much faster than that of CPUs. We use GPUs of nVIDIA GTX 295, GTX 285, and GTX 480 models to probe the computing performance of the conjugate gradient solver for the Dirac equations made of staggered fermions. We use MILC fine lattices (283×96). The performance test is done using 4 GPUs. We use CUDA v2.3 and v3.0 libraries to compile the code. The GPU performance is reviewed in great details.

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talk

Primary authors: KIM, Hyung-Jin (Seoul National University); Prof. LEE, Weonjong (Seoul National Univer-

sity)

Presenter: KIM, Hyung-Jin (Seoul National University)

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