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QUDA features, scaling and solvers

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We describe recent developments to the QUDA software framework, a library aimed at deploying lattice QCD computations on GPUs. The library has ever broadening support for various LQCD actions and algorithms, as well as being integrated into many LQCD applications. Recent focus has been on improving strong scaling for multi-GPU calculations and developing an adaptive multigrid solver. We give updates on both of these efforts, and compare performance against other platforms. Lastly, we look to the future and discuss how upcoming technologies such as stacked memory and nvlink, a fast GPU interconnect, will bring disruptive changes to lattice QCD calculations.

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