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Multigrid solver on Fugaku

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We report an implementation of a multigrid solver on supercomputer Fugaku, which uses A64FX cpu with Arm architecture. On Fugaku, a highly optimized BiCGStab solver with domain decomposed preconditioner for Clover fermion, called QCD Wide Simd library (QWS), is available. Multigrid solvers are made from several components so that one can use a part of QWS such as Clover kernel. As the original QWS has a strong constraint on the local lattice volume due to the usage of vector variable, we also use its reimplementation with flexible local volume extension. The code is developed by using Bridge++ code framework and its extension.

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