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Solving the Dirac equation on QPACE

Friday, 18 June 2010 14:50 (20 minutes)

I present the implementation of a parallel solver currently used on QPACE for N_f=2 flavours of Clover fermions.
I choose the mixed-precision Schwarz preconditioned FGCR algorithm in order to satisfy network bandwidth and latency constraints, to make efficient use of the multicore parallelism and on-chip memory, and to achieve flexibility in the choice of lattice sizes.
I present benchmarks on up to 256 QPACE nodes showing a sustained performance of about 20% for the complete solver and very good scaling.

Please, insert your presentation type (talk, poster)

talk

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