Boyle, Cossu, Portelli, Yamaguchi + additional contributions

- Continue multicore performance portability
  - Intel, AMD multicore & many core
  - IBM BlueGene/Q
  - NEW U. Regensburg (Meyer/Wettig) ARM/Neon, ARM/SVE
- New Functionality
  - Hadrons measurement package (Portelli + others)
  - All-to-all and AMA (O'Haigan)
  - Wilson/Clover multigrid (Richtmann, talk this conf).

Common source GPU port is functional, but incomplete (Boyle)

- Broadly follow strategy developed in collab. with USQCD ECP project https://arxiv.org/abs/1710.09409 (Boyle, Clark, DeTar, Lin, Rana, Vaquero)
- 80%-95% of QUDA performance from native code.
- Data parallel site local expressions saturate memory bandwidth
- Compiles for GPU "naturally" using advanced C++ features