Contribution ID: **260** Type: **Oral Presentation**

Twisted mass ensemble generation on GPU machines

Monday, 8 August 2022 15:00 (20 minutes)

We present progress in interfacing the Hybrid Monte Carlo implementation in the tmLQCD software suite with the QUDA library and compare its performance to our top of the line algorithms on CPU machines. We discuss the main challenges and overheads of our approach and scrutinize its fundamental architectural limitations before exploring ongoing improvements as well as current and future simulations.

Primary authors: Dr KOSTRZEWA, Bartosz (Univ. of Bonn, High Performance Computing & Analytics Lab); GAROFALO, Marco (Helmholtz-Institut für Strahlen- und Kernphysik); ROMITI, Simone (uni-bonn); BACCHIO, Simone (The Cyprus Institute); PITTLER, Ferenc (Helmholtz-Institut für Strahlen- und Kernphysik); FINKENRATH, Jacob

Presenter: Dr KOSTRZEWA, Bartosz (Univ. of Bonn, High Performance Computing & Analytics Lab)

Session Classification: Software development and Machines

Track Classification: Software development and Machines