

Progress in algorithms and numerical tools for QCD

Orsay, 15-16 May 2017

- Workshop organized in the GDR “QCD” framework
- Big effort to develop powerful algorithms and softwares to analyze increasing amount of experimental data (\sim PB) with tricky discrimination between signal and background, and to solve challenging mathematical problems (many-body interaction, sign problem, inverse of sparse matrices)
- Computations done on different kinds of machine, especially grid facilities and massively parallel computers; issues with coming architectures (CPU/GPU, shared memory and threads, accelerators) of the *exa-scale* era: optimization, scaling, maintaining existing codes
- Expertise and know-how need to be structured, to make easier transfers to future developers and discussions among our community
- Widening to other research fields where interesting ideas are investigated