Emulating quantum computers
Victor Alessandrini (CEA, MdIS) - 10h30

There is today increasing consensus on the fact that quantum computing - an emerging data processing technology - may in the future play a significant role (with not yet fully understood boundaries) in high performance scientific computing. The simulation of quantum computers on standard computing platforms is today a necessary step to understand, assess, and develop quantum algorithms for computation, paving the way for the eventual future adoption of this disruptive technology. Emulation software will remain useful for some time to validate results of the earlier quantum computing platforms, and to help tuning application quantum codes. We will present a high level overview of a fully portable emulation library, with emphasis on the applications in quantum chemistry used in the software validation process.

Coffee break at 10h00 in room 26