Contribution ID: **25** Type: **not specified**

Tensor networks: simulating quantum many-body systems and beyond

Wednesday, 11 December 2019 10:15 (15 minutes)

In this seminar we briefly review the current status of tensor network methods, a numerical techniques for performing efficient classical numerical simulations of quantum many-body systems. Tensor network methods promise to become a powerful tool for benchmarking and results verification of future quantum simulations and computations. We will review some of the possible applications of this versatile techniques, ranging from lattice gauge theories to applications in the fields of machine learning and optimization.

Primary authors: Prof. MONTANGERO, Simone (University of Padova); Dr COLLURA, Mario (SISSA); Dr SILVI, Pietro (IQOQI); Mr FELSER, Timo (Ulm University); Dr ARCECI, Luca (University of Padova and INFN); Dr MAGNIFICO, Giuseppe (University of Padova and INFN); NOTARNICOLA, Simone (University of Padova and INFN); Mr ROSSIGNOLO, Marco (Ulm University)

Presenter: NOTARNICOLA, Simone (University of Padova and INFN)

Session Classification: Session 1