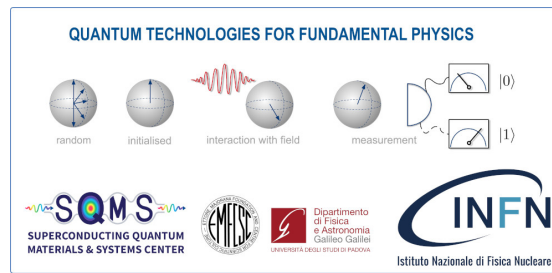


Quantum Technologies for Fundamental Physics



Contribution ID: 67

Type: not specified

Hypergraph states and quantum neural networks

We describe the class of hypergraph states, that generalise the notion of graph states and are employed in several known quantum algorithms, and show how they can be profitably used to realise a quantum computing model of artificial neuron. We describe the implementation of an artificial neural network based on this model and the application to entanglement witnessing and to an industrial case study.

Presenter: MACCHIAVELLO, Chiara (Universita' di Pavia)

Session Classification: Quantum Computation and Simulation