



Universidad de Valladolid



# Quantum Hypergraph States and its Applications

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**Abstract:** Quantum hypergraph states constitute a class of multiqubit states with entanglement and combinatorial properties that generalize quantum graph states. In this presentation, we shall focus on some of the main properties and applications of this class of states on Quantum Information, such as the violation of Bell inequalities, entanglement measures for randomized hypergraph states and some applications for quantum computation.



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