



## ***Multiqubit Entanglement Distribution***

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The distribution of entanglement between separated nodes of small- and large-scale quantum networks is a fundamental task for many quantum communication and quantum information processing applications. This talk will then have two parts. In the first part I will focus on the generation and distribution of entanglement by driving distant qubits with the output of a non-degenerate parametric amplifier. I will then discuss the creation of complex multiqubit states when increasing the number of qubits just by choosing an adequate detuning pattern on the qubits. On the second part, I will show how, while it is not possible to create entanglement from thermal noise, the qubit dynamics change drastically when we drive them with a non-Markovian thermal source, allowing us to create qubit-qubit entangled pairs.

