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Pairing and clustering in quantum wires and in non-abelian quantum Hall states

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In this talk I will describe how attraction between electrons may lead to their clustering in one dimensional wires, and how arrays made of such wires coupled by tunneling may form non-abelian Quantum Hall States when subjected to a magnetic field. This study contributes to the understanding of the mechanisms that form non-abelian Quantum Hall States, which are ideal theoretical models for topological quantum computers