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Departamentos de Física Teórica I y II
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TITULO: Protected qubits and digital methods in ion traps

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ABSTRACT

Decoherence protected qubits are one of the major paths towards the achievement of scalable, fault tolerant, quantum computers. Though their realization in physical systems remains an hard task, trapped ions may provide a feasible implementation, together with a set of quantum gates acting on them. Recent technology developments in digital approximation methods in ion traps may also be useful to demonstrate implementations of correlated bosonic-fermionic systems, such as the Holstein lattice model, and formation of polarons, encoded in the motional and internal degrees of freedom of the ions."

References:

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Phys. Rev. Lett. 109, 200501 (2012)TBA