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Persistent Spin Helix Propagators BAILEY HSU, JEAN-FRANCOIS

VAN HUELE, Brigham Young University — Extensive spintronics work is aimed at achieving high computational speed. Spin coherence is desired in quantum computation. However, spin-orbit coupling which dominates the dynamics in spintronics may lead to spin decoherence. In this talk, we will briefly introduce a class of spin-orbit systems a.k.a Persistent Spin Helix which can lead in principle to infinite spin lifetime. We will analyze the behavior using the quantum propagator formalism.

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