

Abstract Submitted  
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**Communication between spin qubits with microwave photons** RUSKO RUSKOV, CHARLES TAHAN, Laboratory for Physical Sciences, College Park, MD 20740, U.S.A. — We consider possibilities of quantum state transfer between spin qubits (e.g. electrons in quantum dots) utilizing a microwave transmission line and a tunable coupler. We outline the possibility for optimal quantum transfer between qubit nodes depending on qubit-resonator coupling strengths and tunability, and in the presence of imperfections. Implications of such systems to practical quantum computing in silicon and/or GaAs quantum dots are considered.

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