

Abstract Submitted
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Superconducting metamaterial transmission line FRANCISCO ROUXINOL, HAOZHI WANG, B.L.T PLOURDE, Syracuse University — Left-handed metamaterials are artificial composite structures with unusual properties. Such systems have a wide range of potential applications in photonics. We are developing transmission lines composed of superconducting metamaterials using thin-film lumped circuit elements. Such structures allow for the possibility of generating novel transmission spectra with a high density of modes in some frequency ranges and stop-bands in others. We discuss possible couplings of these lines to superconducting qubits in circuit QED architectures.

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