

# Flux pinning and non-Hermitian Luttinger Liquids

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I discuss the problem of interacting vortex lines in a superconducting thin film with a single columnar pin, mapping it onto a Luttinger liquid with an impurity. When the field direction is tilted relative to the direction of the columnar pin a novel non-Hermitian term is generated in the Luttinger liquid Hamiltonian. This leads to interesting effects when the Luttinger liquid interactions cause the pinning potential to renormalize to large values at long distances.