

Abstract Submitted
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Flow induced superfluidity and other novel effects in spin orbit coupled fermionic quantum gases¹ VIJAY B. SHENOY, Indian Institute of Science — Recent experiments on fermions with synthetic gauge fields produce systems with spin-orbit coupling, detuning and Zeeman fields. We show by theoretical considerations that such systems have many interesting features when the fermions experience a contact attraction. In particular, a flow (finite centre of mass momentum) produces a “stronger” superfluid. In addition, we show that such systems can be tuned to have very interesting normal states paving way for studying spin-orbit coupled Fermi liquids.

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