**title**: Non-local magnetization dynamics in Dirac ferromagnets

**abstract**: We study current-induced magnetization dynamics in Topological Insulator - Ferromagnet systems. Exchange interaction between the spins of conducting Dirac fermions in the topological insulator layer and the adjacent ferromagnet's magnetization lead to an out of equilibrium spin accumulation of the Dirac fermions. This spin accumulation is obtained using linear response theory, with which the Dirac spin-orbit torque can be found. The out-of-plane component of the spin accumulation is non-local in nature which is expressed as a convolution of a kernel K with the ferromagnet's magnetization over time and space. This in turn leads to the introduction of non-local spin torques and magnetization dynamics.