

Abstract Submitted
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Magnetization fluctuations on the surface of a magnetically-doped topological insulator DMITRY EFIMKIN, Condensed Matter Theory Center, University of Maryland, College Park, MD, VICTOR GALITSKI, Condensed Matter Theory Center, University of Maryland, College Park, MD and Joint Quantum Institute, University of Maryland, College Park, MD — Ordering of magnetic impurities on the surface of a topological insulator gaps out the surface states and gives rise to anomalous quantum Hall effect, as demonstrated in recent experiments [1, 2]. Here we study theoretically fluctuation phenomena that occur in the vicinity of the ferromagnetic transition in such magnetically-doped topological insulators. We calculate the density of states of the electronic excitations and study transport properties in the fluctuation region.

[1] S.Y. Xu et al., Nature Phys. 8, 616 (2012).

[2] Y. L. Chen et al., Science 329, 659 (2010).

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