

Abstract Submitted  
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**Distorted signal transport in topological insulators and its applications**<sup>1</sup> XIAO ZHANG, Sun Yat-Sen University, CHINGHUA LEE, Stanford University — We develop a theoretical approach for studying the distorted signal transport in topological insulators. It works for arbitrarily applied electric fields and relaxation time. Exact analytic results are obtained for generic driving fields, with a particularly elegant expression for the trigonometric function case. We analytically and numerically study the effects of temperature, relaxation time etc for topological insulators in real conditions and its applications.

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