Topological invariants and the ground state wavefunction of topological insulators[1] ZHONG WANG, Tsinghua University, SHOU-CHENG ZHANG, Stanford University — We will talk about precise topological invariants defined in terms of the ground state wavefuntion. The Hall coefficients in even spatial dimensions and the magnetoelectric theta terms in odd spatial dimensions are expressed in terms of the ground state wavefunctions under generalized twisted-boundary conditions. This formulation is valid in the presence of arbitrary interaction and disorder, in particular, it is applicable to both integer and fractional topological insulators. (arXiv:1308.4900)

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