

Defect, generalized symmetry and edge modes

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Protected edge modes are one of the most exotic phenomena in contemporary condensed matter physics. In this presentation, I show a general quantum Hamiltonian formalism to the protected edge modes based on the recent development of bulk and boundary renormalization groups. Our formalism gives a way to express a series of boundary phenomena in contemporary physics in a concise way. Generalized symmetry and its defect realization which have been formulated and studied in the language of Tensor-Network plays a significant role. I hope the new formalism may be useful both for theoretical and numerical researchers and give a guideline for future research directions. This presentation is based on arXiv:2312.12887.

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