

Symmetry breaking, higher berry phase, and the long exact sequence

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We will develop a theory that describes the fate of anomalies under explicit symmetry breaking perturbations. Along the way, we will describe the classification of invertible TQFT, physical applications of anomalies, and generalizations to higher Berry phase/family anomalies. We will also describe localized modes at domain walls, vortices, and hedgehogs.

The lectures are based on <https://arXiv.org/abs/2309.16749> (physics ref) and <https://arxiv.org/abs/2405.04649> (math ref)