

# Magnetic operators in 2D compact scalar field theories on the lattice

*Thursday, 30 November 2023 14:30 (15 minutes)*

The admissibility conditions are essential for obtaining a well-defined topological charge in lattice gauge theory. However, these conditions may naively seem to prohibit the existence of magnetic operators, as they automatically enforce the Bianchi identity. In this presentation, we will explain how this issue is addressed in the context of 2-dimensional compact scalar theories on a lattice. Additionally, we will explain how applications of this construction, such as 't Hooft anomalies and the Witten effect associated with electric and magnetic.

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