A factorization formulation of Noether’s theorem

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Title: A factorization formulation of Noether’s theorem

Abstract:

Noether’s theorem is a ubiquitous result in mathematical physics that states a correspondence between symmetries of a system and conserved currents. We formulate a precise statement of this in terms of factorization algebras, based on the work of Costello-Gwilliam, with an emphasis on symmetries of holomorphic theories. Some background on perturbative QFT in the BV formalism, as well as formal aspects of factorization algebras, will be given.