

On compatibility between Conformal symmetry and Continuous higher-form symmetries

Monday, 22 November 2021 17:00 (15 minutes)

We will discuss the compatibility between the conformal symmetry together with the unitarity and the continuous higher-form symmetries. We show that the d -dimensional unitary conformal field theories are not consistent with continuous p -form symmetries for certain (d,p) , assuming that the corresponding conserved current is a conformal primary operator. We further discuss several dynamical applications of this constraint. In particular, we show that some gapless, scale invariant quantum field theories are not CFTs.

Presenter: ZHENG, Yunqin (Kavli IPMU, ISSP, U.Tokyo)

Session Classification: Short talks