Department of Theoretical Physics

THE QUANTUM SPACETIME SEMINAR SERIES

Non-Invertible Chiral Symmetry

Clay Cordova

(University of Chicago)

Date: December 2, 2022

Time: 10 AM IST

Zoom link shall be shared separately

We elucidate the fate of classical symmetries which suffer from abelian Adler-Bell-Jackiw anomalies. Instead of being completely destroyed, these symmetries survive as non-invertible topological global symmetry defects with worldvolume anyon degrees of freedom that couple to the bulk through a magnetic one-form global symmetry as in the fractional hall effect. These non-invertible chiral symmetries imply selection rules on correlation functions and arise in familiar models of massless quantum electrodynamics and models of axions.