

Ilka Brunner (LMU München)
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Simone Noja (Universität Heidelberg)
Ivo Sachs (LMU München)
Johannes Walcher (Universität Heidelberg)

JOHANNES GUTENBERG
UNIVERSITÄT MAINZ



RIND seminar on Mathematical Physics and String Theory

May 15, 2023 at 4 p.m. c.t.
None

Joint seminar series on Mathematical Physics and String Theory

Clay Córdova
University of Chicago

Non-Invertible Chiral Symmetry

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 (as well as their non-abelian generalizations)

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