

Abstract Submitted  
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**Anatomy of protected edges without symmetry** MICHAEL LEVIN,  
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— In this talk, we consider the  $\nu = 2/3$  fractional quantum Hall state which has been shown to have protected gapless edge modes even if all symmetries are broken, including charge conservation. Since the edge protection for the  $2/3$  state exists even when charge conservation is broken, one might expect that there is something fundamentally anomalous about the  $\nu = 2/3$  edge beyond the usual U(1) chiral anomaly. In this talk we investigate the anomalous structure of the  $2/3$ -edge state by testing its non-perturbative robustness to a particular type of defect. The defects we consider break charge conservation symmetry and thereby provide insight into the anomalous nature of the  $2/3$  edge going beyond the U(1) chiral anomaly.

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