TEP Seminar

UCLA

Tuesday, February 20th @ 2pm
Schwinger Lounge

"Noninvertible Symmetries, Anomalies and Scattering Amplitudes"

Shota Komatsu (CERN)

Abstract: We demonstrate that crossing symmetry of S-matrices can be violated in theories with non-invertible symmetries or anomalies. Focusing on integrable flows to gapped phases in two dimensions, we show that S-matrices derived previously from the bootstrap approach are incompatible with non-invertible symmetries along the flow. We present consistent alternatives, which however violate crossing symmetry and obey modified rules dictated by fusion categories. We extend these rules to theories with discrete anomalies. Based on work to appear with Christian Copetti and Lucia Cordova.