Contribution ID: **17**   Type: **not specified**

talk 5: Fusion category and S-matrix

Monday 31 March 2025 16:25 (50 minutes)

I will show that categorical symmetries — a refined notion of symmetry that has been actively discussed in the past few years — sometimes lead to a surprising consequence on scattering amplitudes: a modification of crossing symmetry. I will demonstrate this using example of integrable field theories in 1+1 dimensions although the argument holds more generally; namely, also for non-integrable theories. I will also present the results of S-matrix bootstrap, which constrains the space of physically consistent scattering amplitudes with categorical symmetries.

Presenter: KOMATSU, Shota (CERN)