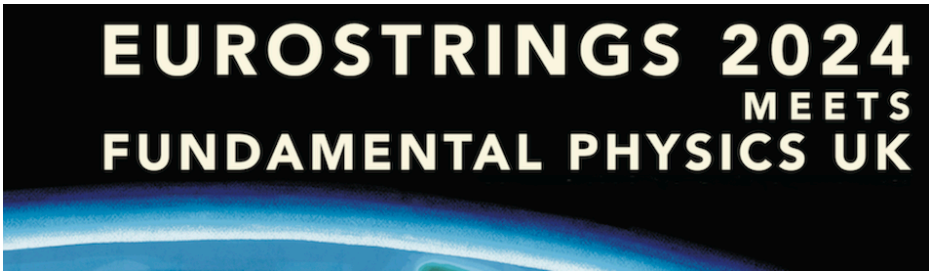

Contribution ID: **167** Type: **Plenary talk**

Higher-form symmetries and the A-twist

Thursday 5 September 2024 16:30 (30 minutes)

I will discuss recent progress in understanding global aspects of the path integral of 3d (or 4d) supersymmetric gauge theories with four supercharges on compact spaces. For simply-connected (or unitary) gauge groups, the so-called Bethe-vacua method allows one to compute many supersymmetric observables in terms of a lower-dimensional 2d TQFT, the topological A-twist of an effective 2d gauge theory. I will explain how to generalise the A-twist formalism in the case when the gauge group G is not simply connected, which amounts to gauging a 1-form symmetry. This leads us to new results and to simplifications of old results, including for pure Chern-Simons theory. For instance, we will discuss the Witten index of the (SU(N)/Z_r)_K theory for any allowed set of integers N, r and K. We will also discuss compactification on the most general supersymmetric manifolds in 3d and 4d.

Link to publication (if applicable)

Presenter: CLOSSET, Cyril

Session Classification: Plenary session