

**Matthew Bullimore**

## **Higher Representations for Extended Operators**

### Abstract

It is known that local operators in quantum field theory transform in representations of an ordinary symmetry group. In this talk, I will explain how extended operators naturally transform in higher representations e.g., line operators transform in 2-representations, surface operators in 3-representations. The approach will be largely graphical, and I will present simple examples from gauge theory. Based on <https://arxiv.org/abs/2304.03789>.