Higher Categories for QFT

Claudia Scheimbauer

What is a higher category and how do I build one? "Higher category" can mean different things, depending on who you ask. In this minicourse we will discuss how to make "higher category aka (\infty,k)-category" a rigorous mathematical object and how to construct one. A guiding example will be the higher Morita category which is a generalization of the bicategory of algebras, bimodules and homomorphisms and the (weak) 3-category of tensor categories, bimodules, functors, and natural transformations aand appears naturally as a home for local observables and defects. The key tool is the language of (pointless) factorizaation algebras. This connects to David Jordan's course on "Applied Cobordism Hypothesis" at last year's summer school.