Interactions of Low-dimensional Topology and Quantum Field Theory



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How to get rid of pointings for constructiong TFTs

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Vector spaces having "duals" are automatically finite dimensional, and this is the case for those appearing as values of TFTs. However, if we assume that the vector spaces are pointed, they are automatically one dimensional (lines). When constructing extended n-dimensional TFTs, a natural family of targets (replaceing Vect) naturally has the feature that pointings are built in. This is due to "factoriazation algebras" having this property. I will explain an approach to fixing this, allowing us to prove a conjecture by Lurie on higher dualizability, which in turn gives fully extended TFTs. This joint work with Eilind Karlsson.

Presenter: SCHEIMBAUER, Claudia (University of Munich)