6th ItaCa Workshop

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Title: Higher dagger categories

Abstract: Higher dagger categories have recently emerged as a promising framework for encoding defects and stratifications in topological quantum field theories using higher categorical methods. While classical examples of dagger categories, such as Hilbert spaces or categories of spans, are easy to describe, higher dagger categories are vastly more intricate structures that are deeply tied to the geometry of bordisms of a certain tangential structure. However, there is a good supply of examples due to the (cobordism-hypothesis inspired, in higher dimensions) open conjecture that any symmetric monoidal n-category with sufficiently many duals gives rise to a higher dagger category. In this talk, I will review the basic theory of higher dagger structures, and point towards current developments.

References

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