Institut Henri Poincaré

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String Theory in Greater Paris

Rencontres Théoriciennes

“Supergravité, théorie des cordes et théorie M”

Jeudi 29 Fevrier 2024, 10:00

Sakura Schafer-Nameki

Oxford

Categorical Symmetries and Phases

Global symmetries can highly constrain the IR or QFTs. With the advent of non- invertible or categorical symmetries, a natural question is how these can characterize the IR phases – both gapped and gapless. I will survey the so- called Symmetry Topological Field Theory (SymTFT) approach to answering this question. The proposal is applicable in general dimension, it provides a systematic classification of the gapped phases, as well as the order parameters – thus generalizing the standard Landau paradigm. I will illustrate this approach in 1+1d theories with fusion category symmetries, describing all gapped phases with categorical symmetries and phase transitions between them.

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