

General Boundary Formulation of Quantum Theory

Friday, 27 October 2017 16:45 (25 minutes)

The General Boundary Formulation (GBF) of Quantum Theory is a new axiomatic formulation of quantum theory combining the mathematical framework of Topological Quantum Field Theory with a probabilistic interpretation that generalises the Born rule. The versatility of the GBF allows to study the dynamics of quantum fields in far more general settings than those usually considered in standard QFT which appears as a special case within the GBF. The problem of quantising the gravitational field represents the main motivation for the development of the GBF. In the talk we will discuss the relevance of the GBF for the problem of quantum gravity and give an overview of the main ingredients of this new formulation as well as results so far obtained and open research lines of the GBF.

Summary

A new formulation of quantum theory is presented. Such new formulation may provide the appropriate framework for the quantum gravity issue.

Primary author: Dr COLOSI, Daniele (Universidad Nacional Autonoma de Mexico)

Presenter: Dr COLOSI, Daniele (Universidad Nacional Autonoma de Mexico)

Session Classification: Talks on Specific Talks - III