Séminaire de physique statistique

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Vendredi 07/02/2020, 16:30-17:30

Orme des Merisiers Salle Claude Itzykson, Bât. 774

Two topics in quantum physics: random matrices and non-Abelian statistics

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In this talk, I will give an overview of the different topics I have been interested in over the past few years. It will be structured around my two main lines of research, which I have started to investigate during my PhD and postdoc. Both parts will consist of an introduction to the topic, followed by a brief description of the main questions I have been working on, and the corresponding results that I have obtained. The first part will focus on applications of random matrix theory in different fields of theoretical physics, mainly centered around quantum scattering. In the next part I will describe my second main topic of interest: the manipulation and detection of excitations with unusual exchange statistics (non-Abelian anyons) in condensed matter systems. I will conclude by presenting possible extensions of these works, as well as the new topics I would like to investigate in the future.