Universidade Federal da Paraíba
Centro de Ciências Exatas e da Natureza
Programa de Pós-Graduação *Stricto Sensu* em Física

Ciclo de Colóquios 2019.1

Colóquio nº 3

"METHODS TO SOLVE THE OPTIMAL CONTROL PROBLEM IN QUANTUM SYSTEMS"

RESUMO: In this talk we consider the problem of bringing a quantum state from an initial state to one with desired properties. Basic concepts of optimal control theory will be briefly discussed, and the problem of optimal control will be presented. In particular, the variational approach will be described in a synthetic way and, with a little more detail, the chopped random basis optimal control technique (CRAB) and the gradient ascent pulse engineering (GRAPE). As examples of application of these approaches, it will be shown how to promote particles of a Bose Einstein condensate, in a quasi-1D trap, to its first excited state, and some qubits examples..

Prof. Dr. Diego Tielas
University of La Plata

5/abr/2019	16:00
Local: Auditório do PPGF (prédio novo)	