

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

## Colóquio

## "The proton radius puzzle"

**RESUMO:** The value of the proton charge radius obtained, with the help of the QED theory, from the pioneer measurements of the Lamb shift in muonic hydrogen is ten times more precise than the proton radius value extracted from electron-proton scattering and Lamb shift measurements in ordinary hydrogen. However, the new value of the proton radius differs by seven standard deviations from the proton radius obtained in other experiments. This apparent discrepancy made the proton radius one of the most hotly discussed topics in physics during last three and a half years. I will describe experimental and theoretical problems connected with determination of the proton radius, and discuss the perspectives of resolution of the proton radius puzzle.

## Prof. Dr. Michael Eides University of Kentunky

21/mar/2014

15h00

Auditório da Pós-Graduação em Física (novo prédio)