



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

Ciclo de Colóquios 2018.2

Colóquio nº 13

“A bottom-up approach to superradiance”

RESUMO: Superradiance in an ensemble of atoms leads to the collective enhancement of radiation in a particular mode shared by the atoms in their spontaneous decay from an excited state. The quantum aspects of this phenomenon are highlighted when such collective enhancement is observed in the emission of a single quantum of light. Here we report a further step in exploring experimentally the nonclassical features of superradiance by implementing the process not only with single excitations, but also in a two-excitations state. Particularly we measure and theoretically model the wave-packets corresponding to superradiance in both the single-photon and two-photons regimes. Such progress opens the way to the study and future control of the interaction of nonclassical light modes with collective quantum memories at higher photon numbers.

<p>Prof. Dr. Daniel Felinto UFPE</p>
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30/nov/2018	16:00
Local: Auditório I do DF (prédio novo)	