**I l D r. Alejandro González-Tudela**

(Max Planck Institute für Quantenoptik) nell'ambito del progetto CORI 2016 (resp. Dr. F. Ciccarello) terrà un ciclo di due seminari didattici dal titolo:

**Quantum Optics in Structured Photonic Environments**

nei seguenti giorni, orari e aule:

- 14 Novembre 2018 alle ore 10.30 presso l'aula B, DiFC, via Archirafi 36.
- 15 Novembre 2018 alle ore 10.30 presso l'aula B, DiFC, via Archirafi 36.

**Tutti gli interessati, in particolare studenti e dottorandi, sono invitati a partecipare. o del Seminario**

## Abstract

Recent experimental developments in nanophotonics [1], circuit QED [2] and atomic physics [3] allow one to engineer systems where atoms (or other quantum emitters) couple to structured photonic environments.In these lectures, I will discuss several phenomena emerging in these setups such as the emergence of photon bound states, which allow one to mediate tunable and long-range interactions [4], or the emergence of novel super/ subradiance phenomena [5].

[1] Nature 508, 241–244 (2014), Nature Communications 5, 3808 (2014), Rev. Mod. Phys. 87, 347 (2015)
[2] Nature Physics 13 (1), 48-52 (2017)
[3] Phys. Rev Lett. 101 (26), 260404 (2010), Nature Physics 8, 267–276 (2012), arXiv:1712.07791
[4] Phys. Rev. X 6 (2), 021027 (2016), Nature Photonics 9 (5), 320-325 (2015), PNAS, 201603777 (2016)
[5] Phys. Rev. Lett. 119 (14), 143602 (2017), Phys. Rev. A 96 (4), 043811 (2017)