EPFL PHYSICS COLLOQUIUM

Physics with artificial atoms

Prof. Per Delsing

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Wallenberg Centre for
Quantum Technology

APERO after the colloquium

Monday
October 28
16:15
Room CE1 2

Superconducting circuits can be used as artificial atoms and I will discuss how they can be used to study new physics. In particular, I will show how artificial atoms can be used to study vacuum fluctuations by placing the atom in front of a mirror and how they can be used to generate nonclassical states of microwaves. I will also show how these atoms can be coupled to sound such that they decay by emitting single phonons instead of single photons. Sound coupled atoms can also act as giant atoms, which leads to new physics in terms of large Lamb shifts and non-exponential decay.

School of Basic Sciences

Organized by the Institute of Physics, EPFL

Host: Prof. Pasquale Scarlino