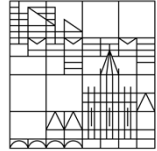


Physikalisches Kolloquium

Universität
Konstanz



Di 17.04.18
15:15 Uhr
14:45 Uhr, Kaffee/Tee
R 513



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Light engineering by adding and subtracting single photons

Light is the perfect candidate for exploring and exploiting the quantum properties of nature. It can be used to test fundamental quantum rules and beat conventional classical limits in measurement, communication, or computation. To do so, one needs to produce, manipulate, and characterize nonclassical light states with single-photon-level accuracies.

In this talk, I will discuss some of the experiments carried out at CNR-INO based on the controlled addition and subtraction of single photons and on different combinations of such basic quantum operations. I will present some advanced applications of these tools and illustrate some of the most fundamental concepts of quantum mechanics at play in the lab.