

Physikalisches Kolloquium



Thursday, 26.10.2017, 17:15, HS 100
Reception with coffee & cookies 16:45
 (For university staff: please bring your own cup for sustainability reasons)

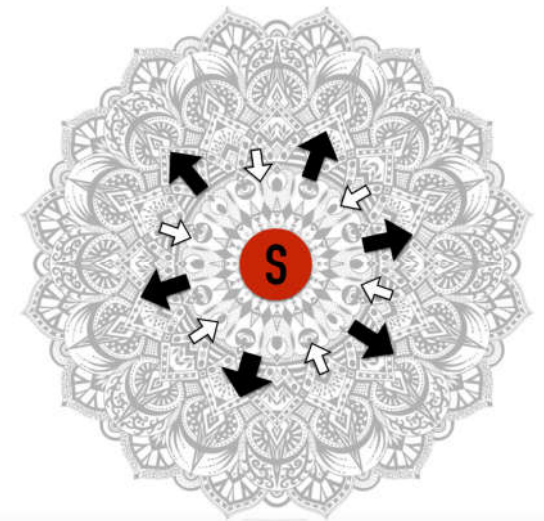
Prof. Sabrina Maniscalco, University of Turku, Finland:

Saving the Quantum: How to make friends with the Environment

Abstract

Since decades, physicists working in quantum technology have been trying to model, understand and counter the loss of quantum properties caused by the environment interacting with quantum systems. Very sophisticated experiments nowadays allow to isolate quantum devices for intervals of times long enough for them to operate in quantum-powered mode. A general rule of thumb has been: the longer the quantum system interacts with its ever-present environment, the worse will its efficiency be.

In this Colloquium I will show how this statement fails for a wide class of open quantum systems. Moreover, I will show how skilful manipulation of the environment allows to directly control the induced dynamics of the quantum system protecting and prolonging its quantum properties.



All of you interested in physics are cordially invited!