



Physikalisches Kolloquium
Einladung

Physics Colloquium
Invitation

Monday, 08 July 2019

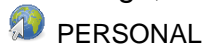
Lecture Hall N24/H13, 16:15

Coffee and cookies will be served in front of the lecture hall from 16:00

**Harnessing non-equilibrium effects in bio-inspired
and engineered quantum networks**

Dr. Erik Gauger

Institute of Photonics and Quantum Sciences
Heriot-Watt University
Edinburgh, UK



In this talk, I will present theoretical work exploring the interplay between coherent quantum and dissipative processes that is typical of condensed matter nano-structures embedded in real-world environments. My approach combines inspiration from the processes and molecular structures that underlie natural photosynthesis with the development of sophisticated open quantum systems approaches. Based on this framework, I will demonstrate the emergence of complex dynamics and non-equilibrium effects. I will argue that some of these effects could become beneficial and unlock non-classical performance for a host of practical applications ranging from improved photodetectors to solar light-harvesting and molecular electronics.

