

## Invitation to IQ<sup>ST</sup> Seminar

on Monday, February 12<sup>th</sup>, 2018, 4pm  
IHFG, Room 00.003  
Universität Stuttgart  
Allmandring 3



**Prof. Dr. Glenn S Solomon**

Joint Quantum Institute

National Institute of Standards and Technology, and University of Maryland

### TITLE

Measuring photon non-classicality using quantum-dot light sources

### ABSTRACT

Quantum light sources are often characterized by their intensity and their non-classicality. In turn, the non-classicality can be characterized by the state statistics; for instance, the single-photon purity, and the indistinguishability of replicas of the state. Thus, three parameters are evaluated (intensity, statical state distribution and indistinguishability) and this generally requires two or more measurements. I will discuss how these measurements can be made simultaneously with number-resolving detectors or several single-photon detectors [1]. These measurements are made with a semiconductor quantum dot light source. We make and characterize these light sources and I will discuss their properties.

[1] T. Thomay, *et al.*, Phys. Rev. X7, 041036 (1017).

Host: Prof. Dr. Peter Michler, IHFG, Universität Stuttgart