

## Theoriekolloquium

---

Am **19. Mai 2022 um 14.15 Uhr** hält

**Herr Dr. Christopher Gies (Bremen)**

einen Vortrag mit dem Titel

### **Controlling light and matter on the quantum scale**

Semiconductor nanostructures offer new possibilities to engineer material properties and the interaction with light on the quantum scale. Quantum photonics enables technologies that arise from the second quantum revolution, i.e. applications that make explicit use of non-classical properties.

In my seminar talk, I will provide an overview of our current activities towards entanglement generation for quantum machine learning and quantum communication. A second focus lies on atomically thin semiconductors and a hybrid approach that was developed in Bremen to access semiconductor-optical properties on the basis of material-realistic ab-initio electronic state calculations.

Interessierte sind herzlich eingeladen.

gez. Prof. Dr. Caterina Cocchi