

# Physical Colloquium

## „Towards new quantum applications and technologies“

Inaugural lecture

**Prof. Dr. Christopher Gies**

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Universität Oldenburg



Monday, 26.05.2025, 2.15 p.m.  
Room No. W02 1-148

### Towards new quantum applications and technologies

Taking you on a journey through a career in theoretical quantum physics, starting with an early interest in Bose-Einstein condensates that brought me all the way across the world before quantum dots led me to Bremen. At the right spot and the right time, we explored the quantum-statistical properties of nanoscale lasers at the boundaries of miniaturization.

I will cover today's research, here at the CvO University of Oldenburg, concentrating on solid-state based and fundamental aspects of quantum mechanics to enable new applications. This includes work done in my group on excitonics, cavity quantum electrodynamics with a brief detour touching on sound design, sources of non-classical light and entanglement, quantum neural networks, aspects of quantum computing, and a brief outlook into the future.

*Everyone is invited to join a small reception following the inaugural lecture.*

Host: Prof. Dr. Niklas Nilius

