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# Kolloquium Quantentechnologien



TECHNISCHE  
UNIVERSITÄT  
DARMSTADT

Zeit: **Dienstag 21.01.2025, 17.15 Uhr**

Ort: Gebäude S2| 15, Raum 51

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## Vibrant nanodrums: from quantum technologies to atmospheric science

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### Abstract:

Ultrathin, highly pretensioned, free-standing silicon nitride films are widely used in photonics, optomechanics and sensing applications due to their outstanding optical and mechanical properties.

In this colloquium I will discuss our recent progress in realizing nanostructured/multiple SiN membrane devices for various applications, ranging from the realization of ultracompact spatial differentiators for photonics, of narrow-linewidth microcavities for quantum optomechanics or of ultrasensitive absolute pressure sensors for the accurate measurement of the saturation vapor pressure of low-volatility substances relevant for atmospheric science.

