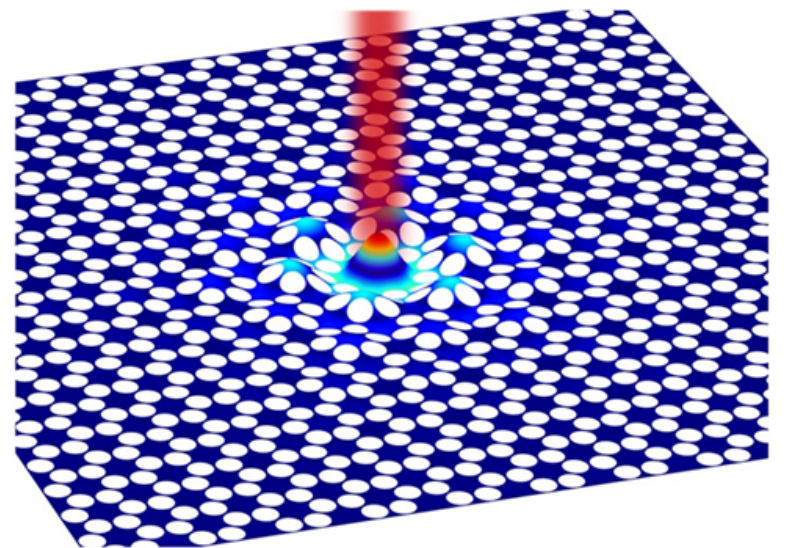


Lowest loss mechanical oscillators for fundamental and applied sensing.

Tuesday, 14 November, 2023
Auditorium & Webcast 16:00 h

Christoph Reinhard (DESY)

Recent years have seen a rapid improvement in the performance of mechanical membrane oscillators. As a result, these devices become increasingly sensitive to external forces. After providing a brief overview on the development of these highly-engineered chip-scale mechanical sensors, I will focus on two exciting future applications. First, high-frequency gravitational wave detection at yet unexplored frequencies around 100 kHz, which requires coupling a membrane to a laser field. Second, wide-range gas pressure sensing, where the calibration can be directly derived from the mechanical properties of the membrane. These recent concepts are also a prime example of synergies between fundamental and applied science.



This is a **HYBRID** colloquium

Meeting ID: 996 1652 8733
Meeting Password: 733220