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Title of the lecture:
Fluctuations at work in nanomechanics

Format:
TBA

Contents:

1. Quantum and thermal fluctuations in quantum optics and nano-mechanics ;
2. Casimir effect as the mechanical effect of quantum radiation pressure ;
3. Screened Casimir interaction in electrolytes ;
4. Gravitational fluctuations and decoherence.

References:

1. "Casimir forces", *in Quantum Optics and Nanophotonics, C. Fabre et al eds (Oxford Univ. Press, 2017)* arXiv oup.com/quantum-optics-and-nanophotonics

2. "Screened Casimir interaction in electrolytes" (Eur. Phys. J. D, 2019*)* arXiv doi.org/10.1140/epjd/e2019-100225-8

3. "Probing the screening of the Casimir interaction with optical tweezers" (Phys. Rev. Research, 2021*)* arXiv doi.org/10.1103/PhysRevResearch.3.033037