



EINLADUNG

im Rahmen des Literaturseminars

zum Vortrag

von

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(INO-CNR BEC Center, Trento)

über

*„Analog models of Hawking and Casimir physics in atomic
and optical systems“*

ABSTRACT:

In this talk I will review the state of the art in the theoretical and experimental study of analog models of quantum field theories in flat, curved, or time-dependent backgrounds using condensed matter and optical systems. In the first part, I will focus on the theory of the stimulated and spontaneous Hawking emission of phonons in flowing fluids of ultracold atoms and of photons in semiconductor microcavities and I will outline the state of the art of experimental investigations. In the second part, I will introduce analogs of two-level emitters coupled to the quantum field and I will present recent works on the observable consequences of Casimir physics and of Ginzburg radiation processes for moving emitters. I will conclude with an outline of more speculative investigations in the direction of highlighting the back-reaction effect of Hawking emission onto a black hole horizon.

Zeit: Donnerstag, 26.01.2017, **14:00**

Ort: Arbeitsgruppe Gravitation, Währinger Straße 17,
Victor-Franz-Hess-Hörsaal, Kavalierstrakt" 1. Stock

gez.: P. Chrusciel