**Fakultät für Physik**
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# *E I N L A D U N G*

im Rahmen Literaturseminars

zum Vortrag

von

**Maciej Maliborski**

(Univ. Wien)

über

## *„Dynamics of nonlinear scalar field with Robin boundary condition on the Schwarzschild--Anti-de Sitter background“*

**Abstract:**

We study the dynamics of a self-interacting spherically symmetric scalar field propagating on the Schwarzschild-anti-de Sitter background.
We consider two parameters in the model: the size of the black hole and the Robin boundary parameter. In addition, we study both the focusing and defocusing nonlinearities.
We find a pitchfork bifurcation in the defocusing case and for the focusing nonlinearity, a region of the phase space where all solutions blow up in finite time.
An extensive study of static solutions and their linear stability allows us to provide a precise asymptotic description of global-in-time solutions and solutions near the threshold of finite-time blowup.
This work is a first step in extending arxiv.org/abs/2001.03980 to asymptotically anti-de Sitter black hole spacetimes. Based on arxiv.org/abs/2312.02760.

**Ort: Seminarraum A, Währinger Straße 17, 2. Stock**

**Zeit**: Mittwoch, **17.1.2024**, **14.15 h**

https://univienna.zoom.us/j/6540036841?pwd=SytyVkZJZzNyRG9lMm13ejlHeHRRUT09

gez.: P. Chrusciel, D. Fajman