



INVITATION

as part of the Gravitational Physics Literature Seminar

to the talk by

Marko SOBAK
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on

“ Global critical points of the Standard Model on expanding spacetimes “

Abstract:

The Standard Model (SM) is one of the greatest successes of modern theoretical physics. Despite this, mathematical references studying the full SM (rather than just its sectors in isolation) on curved spacetimes are somewhat scarce, even though it seems important to understand the theory at a classical level in a more geometric setting. In my talk, I will first briefly review the mathematical structure of the SM Lagrangian, the corresponding Euler-Lagrange equations, and some of their basic properties, particularly related to conformality. Then, I will present a global existence result for the SM equations on four-dimensional spacetimes of expanding type. The talk is focused on a geometrically intrinsic approach to the theory, and the main ingredient for the proof is a gauge-invariant energy estimate.

This is joint work with Volker Branding.

Time: **Wednesday, 9 April 2025, 2:15 p.m.**

Location: **Seminarraum A, Währinger Straße 17, 1090 Vienna, 2nd floor**

<https://univienne.zoom.us/j/6540036841?pwd=SytyVkZJZzNyRG9IMm13ejIHeHRRUT09>

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