



INVITATION

as part of the Mathematical Physics Theory Seminar

to the talk by

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on

“Horror vacui: instabilities in scale-separated Casimir compactifications”

Abstract:

Finding reliable scale-separated vacua with no moduli in the string landscape is a considerable challenge, yet it is essential to connect string theory to our universe. Among several attempts, toroidal compactifications supported by fluxes and Casimir energy stand out for their simplicity and degree of parametric control. In particular, there exist simple such compactifications of eleven-dimensional supergravity leading to non-supersymmetric weakly curved anti-de Sitter solutions in four dimensions. I will show that these solutions are perturbatively (and non-perturbatively) unstable, and thus do not pertain to bona fide four-dimensional effective field theories.

Time: Tuesday, 3 March 2026, 2:00 p.m.

Location: Erwin-Schrödinger Lecture Hall, 1090 Vienna, Boltzmannngasse 5, 5th floor