



universität
wien

Fakultät für Mathematik

Antrittsvorlesung

Mathematisches Kolloquium

Mittwoch, 27. Mai 2026

Sky Lounge

EINLADUNG

Clemens Sämann

(Universität Wien)

„Curvature without differential calculus and its applications to General Relativity“

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Abstract:

I will discuss a recent approach to Lorentzian geometry and general relativity that does not rely on smoothness, or even on the presence of an underlying manifold. This takes us beyond the classical framework of differential geometry and makes it possible to formulate and study curvature (bounds) for low-regularity spacetimes and, more broadly, for spaces equipped with a causal structure and a Lorentzian distance. A comparable shift in perspective has been highly successful in the Riemannian setting, leading to the theories of Alexandrov spaces, $CAT(\kappa)$ spaces, and CD spaces. The talk will introduce the basic ideas without assuming prior knowledge of Lorentzian geometry and will conclude with an outlook on recent developments.

14.45 Uhr: Kaffeejause

15.15 Uhr: Vortrag

Kleines Buffet im Anschluss

Radu Ioan Boț