



UNIVERSITÀ
DEGLI STUDI
DI MILANO

Time: **Feb, 3rd (Tuesday), 2026**
11:30 (Rome, GMT+1)

Location: **Aula 209**
Settore Didattico – Via G. Celoria 18/20

Stäckel and Eisenhart lifts, Haantjes geometry and Gravitation

We present the Stäckel lift as a unified framework for constructing new classes of integrable and separable Hamiltonian systems, extending the classical Eisenhart lift and its conformal generalizations. We prove that systems constructed through momentum-dependent Stäckel matrices are naturally endowed with a symplectic-Haantjes ($\omega_{\mathcal{H}}$) structure whose Haantjes operators are genuinely non-projectable along the fibers of the cotangent bundle. We discuss applications to magnetic systems in cylindrical coordinates, Platonic gravitational waves, Hamilton–Finsler geometries, and the triality between the Eisenhart lift, Randers–Finsler geometry and Zermelo navigation.



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Ondřej Kubů is a Severo Ochoa postdoctoral fellow at ICMAT, Madrid, working with Piergiulio Tempesta on differential geometry applied to integrable systems and separation of variables, primarily within the Nijenhuis and Haantjes framework. He obtained his PhD in September 2024 from the Czech Technical University in Prague under the supervision of Libor Šnobl and Antonella Marchesiello, focusing on superintegrable systems with magnetic fields in classical and quantum mechanics. Previously, he held research stays at Universidad Complutense de Madrid (2023) and Université de Montréal (2019, under Pavel Winternitz).