

BERNOULLIS TAFELRUNDE

MATH STUDENTS AND PHDS SEMINAR

Thursday, 07.05.2026, 12-15:13:00

Seminarraum 05.002, Spiegelgasse 5

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Well-posedness of transport equations in Heisenberg groups

ABSTRACT

Transport equations describe the evolution of quantities conserved along a velocity field and play a central role in Analysis and Mathematical Physics. In the Euclidean setting, DiPerna-Lions (1989) proved existence and uniqueness of solutions for velocity fields with Sobolev regularity. In this talk, I will discuss the extension of this theory to the non-Euclidean setting of Heisenberg groups, where the natural assumption is horizontal Sobolev regularity. In particular, I will present a recent result on existence and uniqueness of solutions to transport equations associated with the class of contact velocity fields. This is joint work with L. Ambrosio, S. Verzellesi and D. Vittone.



*Scan before 06.05.2026 at
16:00 to register for lunch*