Bern-Fribourg Graduate Seminar

a seminar for Master and PhD students

Wednesday 31$^{\text{st}}$ May, 2023: 17:15 - 18:00

Room B7, Exakte Wissenschaften, Bern

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The Sard problem for the End-point map in step 2 Carnot groups

Abstract

The Sard theorem asserts that the set of critical values of a smooth map $f \colon \mathrm{R}^n \to \mathrm{R}^m$ has zero Lebesgue measure.

The theorem has been disproved to various extents (see [1] for instance) when we replace the domain with an infinite-dimensional Banach space.

The aim of the talk is to introduce the End-point map in the setting of step 2 Carnot groups and to prove an even stronger version of the Sard theorem for those kind of maps.

References

[1] S. M. Bates. On smooth rank-1 mappings of Banach Spaces onto the plane. *Journal of Differential Geometry*, 37:729 – 733, 1993.

[2] Francesco Boarotto, Luca Nalon, and Davide Vittone. The Sard problem in step 2 and in filiform Carnot groups. *ESAIM: COCV*, 28, 2022.