“Doc in Progress” is pleased to introduce you to

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PhD in Mathematics

Well-posedness properties of geometric variational problems

In this seminar, I am going to describe well-posedness properties of some geometric variational problems: existence, regularity and uniqueness of solutions. I will discuss two specific problems arising in the context of geometric calculus of variations and sharing strong analogies: the Plateau’s problem and the optimal branched transport problem.

After an exposition of the main existence results, I will present the core ideas of the (interior) regularity theory for area-minimizing currents and for optimal transport paths. In the second part of the seminar, I will present two original results: the generic uniqueness of solutions both for the Plateau’s problem (in any dimension and codimension) and for the optimal branched transport problem. The talk is based on joint works with A. Marchese and S. Steinbrüchel.

Thursday, November 10 – at 16:00 CET

The seminar will take place in Seminar Room “-1” (Department of Mathematics). If needed, please contact docinprogress.unitn@gmail.com using an institutional e-mail address to ask for a Zoom streaming of the event.