

BERNOULLIS TAFELRUNDE

GRADUATE STUDENT SEMINAR

Monday, 8 May 2023, 12:15-13:00
Seminarraum 05.002, Spiegelgasse 5

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Wild solutions to Euler-Lagrange equations

ABSTRACT

We study very weak solutions to Euler-Lagrange equations associated with quadratic convex functionals. After having introduced Sobolev spaces and some of their properties, we investigate whether the regularity of distributional $W^{1,1}$ solutions can be improved. We answer positively in a suitable class of functionals. Conversely, using convex integration, we also provide counterexamples outside this class of functionals.