

**Regularity for almost minimizer of a one-phase
Bernoulli-type functional in Carnot Groups of step
two**

Enzo Maria Merlino

Alma Mater Studiorum Università di Bologna

☉ June 7, 09:30

The regularity of minimizers of the classical one-phase Bernoulli functional was deeply studied after the pioneering work of Alt and Caffarelli. More recently, the regularity of almost minimizers was investigated as well. We present a regularity result for almost minimizers for a one-phase Bernoulli-type functional in Carnot Groups of step two. Our approach is inspired by the methods introduced by De Silva and Savin in the Euclidean setting. Moreover, some recent intrinsic gradient estimates have been employed. Generalizations to the nonlinear framework will be discussed. Some of the results presented are obtained in collaboration with F. Ferrari (University of Bologna) and N. Forcillo (Michigan State University).