A PRINCIPLE OF COMPARISON WITH DISTANCE FUNCTIONS FOR ABSOLUTE MINIMIZERS.

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A peculiarity of variational problems involving supremal functionals is the distinction between minimizers (defined as usually) and a class of particular minimizers, called absolute minimizers, whose optimality is *local*. Unlike usual minimizers, the absolute minimizer may, under mild assumptions on the supremand, be characterized as the unique solution of an associated PDE. Moreover, in the particular case of the Minimizing Lipschitz Extension Problem, the absolute minimizer is also characterized via the so-called principle of comparison with cones introduced by Crandall, Evans and Gariepy. In this talk, we show how this principle, re-baptized *comparison with distance functions*, may be extended to a wide class of problems involving supremal functionals, and thus provide a general geometrical characterization of the absolute minimizers. We also show that the basic idea also applies to the absolute minimizers of the minimal Lipschitz extensions in length metric spaces.

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