SELF-CONTRACTED CURVES: FROM EUCLIDEAN SPACES TO RIEMANNIAN MANIFOLDS.

ARIS DANIILIDIS
UNIVERSIDAD DE CHILE.

Abstract. Self-contracted curves have been initially introduced for the study of (discrete or continuous) steepest descent systems of quasiconvex functions in Hilbert spaces. However, their definition is simple and is naturally formulated in mere metric spaces, without any prior regularity assumption (continuity or absolute continuity) of the curve. This has motivated a study of intrinsic properties of such curves, mainly related to rectifiability. In this talk, which is based on joint works with G. David (Orsay), R. Deville (Bordeaux), E. Durand (UNED), A. Lemenant (Paris 7) and L. Rifford (Nice) we shall describe the state-of-the-art on this topic.