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A Dual Characterization of Length Spaces with Applications to Dirichlet Metrics

PETER STOLLMANN
TU Chemnitz

Abstract. Path metric or length spaces are metric spaces in which any two points can be joined by a path with length arbitrarily close to the distance of the points. In my talk I will explain a characterization in terms of a natural dual object, the set of 1-Lipschitz functions. As an application I will describe the intrinsic metric of Dirichlet forms and show that the latter always induce length spaces.