第２０１回 広島数理解析セミナー （２０１６年度）

Hiroshima Mathematical Analysis Seminar No.201

日時 ： ６月２４日（金）１６：３０～１７：３０

場所 ： 広島大学理学部 Ｂ７０７

講師 ： Salomé Oudet 氏 （東京大学）

題目 ： Hamilton-Jacobi equations for optimal control problems on 2-dimensional junctions

要旨 ： We are interested in infinite horizon optimal control problems on 2-dimensional junctions (namely an union of half-planes sharing a common straight line) where different dynamics and different running costs are allowed in each half-plane. As for more classical optimal control problems, ones wishes to determine an Hamilton-Jacobi equation which characterizes the value function. However, the geometric singularities of the 2-dimensional junction and discontinuities. of data do not allow to apply the classical results of the theory of the viscosity solutions.

We will explain how to avoid these difficulties using arguments coming both from the viscosity theory and from optimal control theory. By this way we prove that the expected equation to characterize the value function is well posed. In particular we prove a comparison principle for this equation.

広島数理解析セミナー幹事

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