第２０５回 広島数理解析セミナー （２０１６年度）

Hiroshima Mathematical Analysis Seminar No.205

日時 ： １０月２１日（金）１５：００〜１７：３０

場所 ： 広島大学理学部 Ｂ７０７

今回は２件の講演です．
１５：００〜１６：００

講師 ： 柳 青 氏 （福岡大学）

題目 ： Convexity preserving properties for Hamilton-Jacobi equations in geodesic metric spaces

要旨 ： We study convexity preserving properties for a class of time-dependent Hamilton-Jacobi equations in geodesic metric spaces. Convexity preserving properties for nonlinear evolution equations are well known in the Euclidean space. We extend the classical results for first order equations to Busemann spaces by using a recently developed theory of viscosity solutions on geodesic spaces. We provide two different approaches and discuss several generalizations for more general geodesic spaces. This talk is based on joint work with A. Nakayasu.

１６：３０～１７：３０

講師 ： Nam Q. Le 氏 （Indiana University）

題目 ： Global smoothness of the Monge-Ampère eigenfunctions

要旨 ： In this talk, I will introduce the Monge-Ampère eigenvalue problem and discuss the global smoothness of the eigenfunctions. The question of global higher derivative estimates up to the boundary of the eigenfunctions of the Monge-Ampère operator is a well known open problem. I will discuss the recent resolution of global smoothness of the eigenfunctions of the Monge-Ampère operator on smooth, bounded and uniformly convex domains in all dimensions. A key ingredient in our analysis is boundary Schauder estimates for certain degenerate Monge-Ampère equations. This is joint work with Ovidiu Savin.

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