鹿児島大学数理情報科学談話会

第２３３回

日時：2019 年 4 月 18 日（木）17:00 – 18:00

場所：理学部 2 号館 404 室

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題目：Some Bonnet--Myers Type Theorems for Transverse Ricci Solitons on Sasaki Manifolds

Abstract:

The aim of this talk is to discuss the compactness of complete Ricci solitons. Ricci solitons were introduced by R. Hamilton in 1982 and are natural generalizations of Einstein manifolds. They correspond to self-similar solutions to the Ricci flow and often arise as singularity models of the flow. The importance of Ricci solitons was demonstrated by G. Perelman, where they played crucial roles in his affirmative resolution of the Poincaré conjecture.

In this talk, after we review basic facts on Ricci solitons, I would like to introduce some Bonnet--Myers type theorems for complete Ricci solitons. Our results generalize the previous Bonnet--Myers type theorems due to W. Ambrose (1957), J. Cheeger, M. Gromov, and M. Taylor (1982), M. Fernández López and E. García Río (2008), M. Limoncu (2010, 2012), Z. Qian (1997), Y. Soylu (2017), and G. Wei and W. Wylie (2009). Moreover, I would also like to extend such Bonnet--Myers type theorems to the case of transverse Ricci solitons on complete Sasaki manifolds. Our Bonnet--Myers type theorems for complete Sasaki manifolds generalize the Bonnet--Myers type theorems due to I. Hasegawa and M. Seino (1981) and Y. Nitta (2009).

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