
Student Geometry Seminar

國立清華大學數學系 學生幾何研討會

講題 On the Five-Dimensional Sasaki-Ricci Solitons

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Abstract

In the literature, Sasakian manifolds are usually treated as the odd-dimensional counterpart of Kähler manifolds. Specifically, the Kähler cone of a Sasaki-Einstein 5-manifold is a Calabi-Yau 3-fold and its Reeb foliation admits the transverse Kähler-Einstein structure. On the other hand, inspired by the work of Yu Li and Bing Wang on the classification of all Kähler-Ricci shrinker surfaces, we are interested in the classification problem of five-dimensional Sasaki-Ricci solitons. In this talk, as the first step toward this objective, some fundamental estimates would be set up, and then we will establish the two criteria about the transverse rigidity and the applications. This is a joint work with Prof. Shu-Cheng Chang and Fengjiang Li.

