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Joint Geometric Analysis Seminar

Gap phenomena for obstruction-flat metrics and its topological applications

Prof. Wei Yuan
Sun Yat-Sen University

Abstract

Obstruction tensor is a trace-free symmetric 2-tensor, which indicates whether a given representative for the conformal infinity of a conformally compact Einstein manifold can be smoothly extended to the interior of the manifold. As a special case for 4-dimensional manifolds, obstruction tensor is exactly the well-known Bach tensor. In this talk, we will present a type of gap phenomena associated to closed manifolds with vanishing obstruction tensor. Moreover as an application, we will study the topology of 8-dimensional locally conformally flat manifolds and give an estimate of its Euler characteristic. This talk is based on a series of joint works with Dr. Fang Yi in Anhui University of Technology.

Date: 10 April 2019 (Wednesday)
Time: 11:00am – 12:00noon
Venue: Room 502a, Academic Building No.1 ,
The Chinese University of Hong Kong, Shatin

All are Welcome