NCTS Special Day on Isometric Embeddings

Date : 15 July 2016 (Friday)
Venue : Room 440
NCTS (Astro-Math Bldg., NTU)
Organizer : Mao-Pei Tsui (NTU)

Speaker :
Ye-Kai Wang
(Michigan State University)
Zhizhang Wang
(Fudan University)

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Purpose :
The main goal of this special day activity is to bring together several experts to report on the recent progress of the isometric embedding problem in warped product spaces.

NCTS
National Center for Theoretical Sciences

Agenda

09:30-10:00 REGISTERATION

10:00-11:00 TALK (YE-KAI WANG)

Title: Isometric embedding into 3-dimensional hyperbolic space

Abstract: We generalize Weyl and Nirenberg's work on isometric embedding. The main result says that given a metric g on a topogical sphere, if the Gauss curvature of g is greater than -1, then there exists an isometric embedding into the 3-dimensional hyperbolic space. Moreover, the embedding is unique up to isometries in hyperbolic space (due to Guan-Shen). This is a joint work with Chen-Yun Lin.

11:00-11:15 TEA BREAK

11:15-12:15 TALK (ZHIZHANG WANG)

Title: The Weyl problem in warped product space (I)

Abstract: In these two talks, we report the progress of the Weyl problem in warped product space. We will discuss the openness, non-rigidity and some applications. These results together with the a priori estimates obtained by Lu imply some existence results. Meanwhile we reprove the infinitesimal rigidity in the space forms. This is a joint work with Chunhe Li.

12:15-14:00 LUNCH & BREAK

14:00-15:00 TALK (ZHIZHANG WANG)

Title: The Weyl problem in warped product space (II)

15:00-15:30 TEA BREAK

15:30-16:30 DISCUSSION