10:00am - 11:00am  
**Speaker:** Professor Chen-Yu Chi (National Taiwan University)  
**Title:** Birational geometry of projective varieties and pseudonorms on their pluricanonical spaces  
**Abstract:** In 1971, H. L. Royden proved that two compact Riemann surfaces are isomorphic exactly when there exists a linear isometry between their spaces of holomorphic quadratic differentials. Inspired by Royden's result, S.-T. Yau proposed a program aiming at birational classification of complex algebraic manifolds by studying canonical norm-like functions on spaces of holomorphic higher differentials. In this talk, we will introduce Yau's program as well as some related results.

11:00am - 11:20am  
**Tea Reception**

11:20am - 12:20pm  
**Speaker:** Mr. Jifu Xiao (Kyoto University)  
**Title:** Large extremal transition and quantum cohomology  
**Abstract:** In this talk, I will speak of how the quantum cohomology changes under extremal transition. Let $X_{sm}$ be a non-singular algebraic variety whose first chern class is non-positive. The variety $X_{sm}$ admits a degeneration which is denoted by $X_{sing}$. The singular variety $X_{sing}$ admits a crepant resolution $X_{res}$. We say the varieties $X_{sm}$ and $X_{res}$ are related by extremal transition. We are interested in the following problem: is there any relationship between the quantum cohomology of $X_{sm}$ and that of $X_{res}$? Our work investigates the case when $X_{sm}$ and $X_{res}$ are three-folds and are related by the so called conifold transition. We also calculated some higher dimensional examples e.g. $Gr(2,4)$ and $Gr(2,5)$. To our surprise, we found some new phenomena which is specific to higher dimensional cases. This talk is based on the joint work with Hiroshi Iritani.

12:20pm - 2:20pm  
**Lunch**

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**Jointly organized by The Institute of Mathematical Sciences and Department of Mathematics, CUHK**  
**Organizers:** Kwokwai Chan, Conan Leung

☞ This event is supported by “Programme on Geometric Analysis” ☞

☞ All are Welcome ☞