Institute of Mathematical Research
HKU

Department of Mathematics
HKUST

Department of Mathematics and IMS
CUHK

Hong Kong Geometry Colloquium
September 14, 2024 (Saturday)
Room 210, Run Run Shaw Bldg., HKU

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Professor Kang Zuo

School of Mathematics and Statistics

Wuhan University, Wuhan, China

Maps into moduli spaces and generic rigidity

10:00 – 11:00am

Introducing the notion of generic rigidity for maps into moduli spaces of projective manifolds with good minimal model, we conjecture that a moduli space, which fails to satisfy generic rigidity, is a Shimura variety of rank > 1. In other words, a moduli space, which is not a Shimura variety of rank > 1, is indeed generic rigid. We will discuss some evidences to this conjecture. This is a joint project with Chen-Hu-Sun.

11:00 – 11:20am *Tea Break*

Professor Laurent Stolovitch

Laboratoire de Mathématiques "Jean-Alexandre Dieudonné"

Université Côte d'Azur, Nice, France

CR singularities and dynamical systems

11:20am – 12:20pm

In this talk, we'll survey some recent results done since the seminal work of Moser and Webster about smooth real analytic surfaces in $\mathbb{C}^2$ which are totally real everywhere but at a point where the tangent space is a complex line. Such a point is called a singularity of the Cauchy-Riemann structure. We are interested in the holomorphic classification of these surfaces near this singularity. It happens that there is a deep connection with holomorphic classification of some holomorphic dynamical systems near a fixed point so that new results for the later provide new results for the former.

This meeting is hosted by the Institute of Mathematical Research, HKU.

All are Welcome