



The Hong Kong University of Science and Technology

Department of Mathematics

Hong Kong Geometry Colloquium

The proof of the generalized Witten conjecture

By

Prof. Fan Huijun

Department of Mathematics

Peking University, Beijing

Abstract

In this talk I will explain the quantum singularity theory (FJRW-theory) and give a sketch of the proof of the generalized Witten conjecture for DE cases. Note that the original Witten conjecture was proven by Kontsevich around 1990 and the generalized Witten conjecture for A case was recently solved by Farber-Shadrin-Zvonkine (2006-2007). This is a joint work with Tyler Jarvis and Yongbin Ruan.

Date : Saturday, 31 October 2009

Time : 10:00a.m.-11:00a.m.

***Venue : Room 1504, Academic Building
(near Lifts 25 & 26), HKUST***

Maps and Hall algebras

By

Prof. Yukinobu Toda

Institute for the Physics & Mathematics of the Universe

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Abstract

Recently the wall-crossing formula of Donaldson-Thomas invariants is developed by Joyce-Song and Kontsevich-Soibelman. The key idea is to express the Harder-Narasimhan filtration in the Hall-algebra of the relevant category. In this talk, I will explain analogues phenomena for moduli stacks of maps from curves. Hopefully, this phenomena will lead to the wall-crossing formula of Gromov-Witten invariants.

Date : Saturday, 31 October 2009

Time : 11:20a.m.-12:20noon

***Venue : Room 1504, Academic Building
(near Lifts 25 & 26), HKUST***

All are welcome!

Light refreshment will be provided at Room 3493 from 11:00 am to 11:20 am