The Hong Kong University of Science and Technology

Department of Mathematics

Hong Kong Geometry Colloquium

Exotic twisted equivariant cohomology of loop spaces, twisted Bismut-Chern character and T-duality

By

Prof. Fei Han

National University of Singapore

Abstract

Inspired by the point of view of Bismut's loop space functor and Stolz-Teichner's dimension reduction functor, we introduced the exotic twisted equivariant cohomology of loop spaces and constructed the twisted Bismut-Chern character taking values in this exotic theory. We also discuss their application to T-duality in string theory. This represents our joint work with Mathai.

Date : Saturday, 10 October 2015
Time : 10:00a.m. - 11:00a.m.
Venue : Room 1505, Academic Building
(near Lifts 25 & 26), HKUST

The topological recursion and Givental--Teleman's higher genus reconstruction

By

Prof. Todor Milanov

Kavli Institute for the Physics and Mathematics of the Universe, IPMU

Abstract

The topological recursion of Eynard--Orantin--Chekhov came from the theory of matrix models. It is a very efficient procedure to compute correlation functions in various quantum field theories. In the first part of my talk, I will explain how the higher genus reconstruction of Givental--Teleman can be replaced by the local topological recursion. In the 2nd part, I would like to discuss the problem of extending from local to global, which is closely related to the problem of identifying the Gromov--Witten invariants with the correlation functions of a Conformal Field Theory with central charge 1.

Date : Saturday, 10 October 2015
Time : 11:30a.m. - 12:30p.m.
Venue : Room 1505, 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