



THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

SEMINAR ON PURE MATHEMATICS

Birational invariance of BCOV invariants

by

Dr. Lie FU

Radboud University, Netherlands

Abstract

As a candidate of the B-model mirror of genus one Gromov-Witten invariants, the so-called Bershadsky-Cecotti-Ooguri-Vafa (BCOV) invariant is a real-valued invariant of Calabi-Yau manifolds defined using analytic methods. In a joint work with Yeping Zhang, based his earlier work, we showed that birationally isomorphic Calabi-Yau manifolds have the same BCOV invariant, confirming a conjecture of Fang, Lu and Yoshikawa. Furthermore, we extended the definition, as well as the birational invariance, of the BCOV invariants to all varieties with numerically trivial canonical class and Kawamata log terminal singularities. I will emphasis the interesting parallel between our argument and Kontsevich's proof of the birational invariance of Hodge numbers of Calabi-Yau manifolds using motivic integration.

Date : 18 March 2021 (Thursday)

Time : 4:00pm – 5:15pm

Zoom Meeting : <https://hkust.zoom.us/j/9584764665>(Passcode: 2022)

All are Welcome!