

IMS DISTINGUISHED VISITOR LECTURE SERIES

Date, time and venue

22 August 2023 (Tuesday)

10–11am, GMT +8 (Singapore Time)

IMS Auditorium

3 Prince George's Park, Singapore 118402

On deformations over non-commutative base

Yujiro Kawamata

It is natural to consider deformations of sheaves over non-commutative base, because they are controlled by non-commutative dg algebras. We will describe versal non-commutative deformations, and show some applications to birational geometry and derived categories.

Colloquium talk

Jointly organized with Department of Mathematics, NUS

Date, time and venue

24 August 2023 (Thursday)

2–3pm, GMT +8 (Singapore Time)

Seminar Room 1

Department of Mathematics

Block S17, Level 4

10 Lower Kent Ridge Road, Singapore 119076

On non-commutative deformations of complex manifolds

Yujiro Kawamata

We will describe infinitesimal deformations of complex manifolds to the direction of something having possibly non-commutative structure sheaves by using Hochschild cohomology. We will also describe global non-commutative deformations of some surfaces.



Professor Yujiro Kawamata
The University of Tokyo, Japan

Professor Yujiro Kawamata is a University Professor of the University of Tokyo. He obtained his PhD from the University of Tokyo in 1980. His awards include the Mathematical Society of Japan Autumn award (1988), the Japan Academy of Sciences award (1990), ICM speaker (1990) and ISI Highly Cited Researcher (2001).

His research field is algebraic geometry, especially birational geometry. His research topics include subadditivity of Kodaira dimension, birational characterization of abelian varieties, vanishing theorem for cohomology of \mathbb{Q} -divisors, minimal model program of algebraic varieties, adjunction theory of canonical divisors, deformations of algebraic varieties and singularities, semi-orthogonal decomposition of derived categories, and non-commutative deformations.

The talk is part of the program on

Recent Developments in Algebraic Geometry, Arithmetic and Dynamics Part 2 (14 August–1 September 2023)

Program webpage

<https://tinyurl.com/rdims2023>

Registration

<https://tinyurl.com/RecentDevelop2Reg>

