

THE UNIVERSITY



OF HONG KONG

*Institute of Mathematical Research
Department of Mathematics*

GEOMETRY SEMINAR

Shifted Poisson structure and elliptic deformation

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Abstract

In their seminal paper, Pantev, Toen, Vaquie and Vezzosi introduced the notion of shifted symplectic structure on derived stacks. Later PTVV + Calaque further introduced the shifted Poisson structure. In this talk, I will present my recent work joint with Alexander Polishchuk. We prove that the moduli space of complexes of vector bundles (up to chain isomorphisms) on CY d -fold carries a $(1 - d)$ -shifted Poisson structure. This generalizes various interesting Poisson structures in algebraic geometry and integrable systems. Finally, I will explain how to use our theorem to classify the symplectic leaves of elliptic deformation of Hilbert scheme of points on P^2 .

Date: March 14, 2017 (Tuesday)

Time: 4:00 – 5:00pm

Venue: Room 210, Run Run Shaw Bldg., HKU

All are welcome