THE UNIVERSITY   **OF HONG KONG**

Institute of Mathematical Research
Department of Mathematics

Geometry Seminar

Cohomology of quiver varieties and other moduli spaces

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Abstract

Nakajima's quiver varieties form an important class of algebraic symplectic varieties. A quiver variety comes naturally equipped with certain "tautological vector bundles"; I will explain joint work with McGerty that shows that the cohomology ring of the quiver variety is generated by the Chern classes of the tautological bundles. Analogous results (work in preparation with McGerty) also hold for the Crawley-Boevey—Shaw "multiplicative quiver varieties," in particular for twisted character varieties; and the cohomology results in both cases generalize to other cohomology theories, derived categories, etc. I hope to explain the main ideas behind the proofs of such theorems and how they form part of a general pattern in noncommutative geometry.

Date: February 6, 2018 (Tuesday)

Time: 4:00 – 5:00pm

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

All are welcome