

# SCMS Seminar



## GENERALIZED DONALDSON-THOMAS INVARIANTS VIA VIRTUAL CYCLES

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**Time:** 9:15-10:15, Tuesday, August 1, 2017

**Venue:** Room 2201, East Main Guanghai Tower, Handan Campus

**Abstract:** Donaldson-Thomas (abbreviated as DT) theory is an important sheaf theoretic technique of enumerating curves on a Calabi-Yau threefold. When originally introduced by Richard Thomas, DT invariants gave a virtual count of stable sheaves provided that no strictly semistable objects exist. This assumption was later lifted by the work of Joyce and Song who defined generalized DT invariants using Hall algebras and the Behrend function, their method being motivic in nature.

In this talk, we will present an approach towards generalized DT theory via the machinery of virtual cycles, thereby obtaining a generalized DT invariant as the degree of a cycle inside a Deligne-Mumford stack. Based on joint work with Young-Hoon Kiem and Jun Li.