

***ATOMIC SHEAVES, LAGRANGIAN SUBVARIETIES, AND  
BRIDGELAND MODULI SPACES***

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**Time: Tue, Nov. 5, 2024, 13:45-14:15**

**Venue: Room 102, SCMS**

**Abstract:**

Let  $X$  be a Gushel--Mukai fourfold. In this talk, we focus on the hyper-Kähler variety  $M$ , which arises as a Bridgeland moduli space of stable objects in the Kuznetsov component of  $X$ . First, we construct Lagrangian subvarieties of  $M$  using moduli functors between the Kuznetsov components of  $X$  and its hyperplane sections. Then, we provide new examples of atomic sheaves and projectively hyperholomorphic vector bundles on  $M$ , constructed from these Lagrangian subvarieties. This is based on two joint works with Soheyla Feyzbakhsh, Zhiyu Liu, and Shizhuo Zhang.