

# Student Differential Geometry Seminar

Stony Brook University

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**John Sheridan** : “Hyper-Kähler manifolds”

ABSTRACT: We will discuss hyper-Kähler manifolds, indicating the various geometric structures they support and how these interact. After introducing some classical invariants of these manifolds, we will discuss a number of examples and constructions in the compact setting. Time permitting, we will mention some results in the deformation theory of hyper-Kähler manifolds and point out some open problems.