



DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

Colloquium

CONSTRUCTION OF SPECIAL LAGRANGIANS IN COLLAPSING LIMITS

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ABSTRACT:

Special Lagrangian submanifolds, introduced by Harvey and Lawson, are an important class of minimal submanifolds in Calabi-Yau manifolds. In this talk, I will explain common constructions of special Lagrangians and then a gluing construction of a special Lagrangian in Calabi-Yau manifolds with K3-fibrations when the K3-fibres are collapsing. Furthermore, these special Lagrangians converge to an interval or loop of the base of the fibration at the collapsing limit. This phenomenon is similar to holomorphic curves collapsing to tropical curves in special Lagrangian fibrations and is only a tip of the iceberg of the Donaldson-Scaduto conjecture. This is a joint work with Shih-Kai Chiu.

4 – 5pm

Wednesday, October 16, 2024

Room 204, Smith Hall