An introduction to (infinitesimal) categorical torelli

by Xun Lin

from Hong Kong University of Science and Technology

In the first part, I will talk about the categorical torelli. We prove the Kuznetsov components of a series of hypersurface in projective space reconstruct the hypersurfaces. Our method allow us to work for hypersurfaces in weighted projective space, and prove the reconstruction theorem for veronese double cone, which is a long-time open case. Joint with J. Rennemo and Shizhuo Zhang. In the second part, I will talk about the infinitesimal categorical torelli for Fano 3-folds. I will prove the classical infinitesimal torelli for Fano 3-folds using the infinitesimal categorical torelli, especially for special Gushel-Mukai 3-folds. Joint with Shizhuo Zhang and Zheng Zhang.

Room 2405 (Lifts 17/18)   Wed, Oct 8, 2025 04:00 PM