BOSTON UNIVERSITY GEOMETRY AND PHYSICS SEMINAR

THE TORELLI PROBLEM FOR LOG CALABI-YAU THREEFOLDS

Wendelin Lutz
UMass Amherst

CCDS 365, Nov 8, 2023, 4-5pm

Tea: 3:45pm in Room 365

Abstract: The classical Torelli problem asks whether a smooth projective variety can be recovered from the Hodge structure on its middle cohomology. A log Calabi-Yau variety U is quasiprojective, so has a Deligne mixed Hodge structure on its middle cohomology, and one can similarly ask to what extent U can be recovered from its mixed Hodge structure. The situation is well-understood in dimension 2 due to work of Gross-Hacking-Keel. I will present partial results in the 3-dimensional case, and applications to the Morrison-Kawamata cone conjecture. This is work in progress with Paul Hacking.

See `http://math.bu.edu/research/geom/seminar.html` or contact Yu-Shen Lin (*yslin@bu.edu*) or Brian Williams (*bwill22@bu.edu*) for more information.