THE UNIVERSITY **OF HONG KONG**

Institute of Mathematical Research
Department of Mathematics

GEOMETRY SEMINAR

Q_ℓ versus F_ℓ coefficients in the Grothendieck-Serre/Tate conjectures

Dr. Chun Yin Hui
The University of Hong Kong

Abstract

This is a joint work with Anna Cadoret and Akio Tamagawa. We investigate the relation between the Grothendieck-Serre/Tate conjectures with Q_ℓ and F_ℓ-coefficients for all sufficiently large ℓ. In particular, when X is a smooth projective variety defined over a finitely generated field K of characteristic $p > 0$, we prove that the Tate conjecture with Q_ℓ-coefficients for divisors of X for all ℓ not equal to p is equivalent to the finiteness of the Galois-fixed part of the prime-to-p torsion subgroup of the geometric Brauer group $Br(X_{\overline{K}})$. The equivalence when K is finite is a result of Tate.

Date: November 22, 2021 (Monday)
Time: 4:00 – 5:00pm
Venue: Room 210, Run Run Shaw Bldg., HKU

Attendance limited
Register Now

All are welcome