

***POSITIVITY IN CHARACTERISTIC P AND SOME RECENT
APPLICATIONS***

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Time: Fri., Jan. 5th, 14:00-16:00PM

Venue: Room 102, SCMS

Abstract:

Positivity of the push forward of pluricanonical sheaves plays an important role in the birational geometry. Over the field of complex numbers, positivity of the push forward of pluricanonical sheaves are proved by use of variation of Hodge structure. In characteristic p , the analogous results are proved by use of the technique of trace map of the (rel-)Frobenius iterations. In the lectures, I plan to explain (1) the related positivity results in characteristic p and the strategy of the proof; (2) some recent applications in the study of varieties with nef anti-canonical divisors due to Ejiri and Patakfalvi.