ON THE EXTENSION OF NUMERICALLY TRIVIAL DIVISOR ON A FAMILY

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Time:Wed, Sep.24th, 15:30-17:00
Venue: Room 102, SCMS

Abstract:

For a projective morphism f: X to S, we explore when it is possible to extend a divisor that is numerically trivial over an open subset to a global relatively num-trivial divisor. In particular, we show that such L always exists after a (weak) semi-stable reduction when $\dim S=1$.

On the other hand, we give an example showing that L may not exist (after any reasonable modification of f) if $\dim S\ge 2$, which also gives an f_U-nef divisor M_U that cannot extend to an f-nef ($\Qq$) divisor M for any compactification of $f|_U$, even after replacing X_U with any higher birational model.