
CECILIA SALGADO, UFRJ

Rank bounds on fibrations of jacobians varieties

Let k be a number field, X a surface defined over k and $\pi : X \rightarrow B$ a fibration of genus g curves. Néron-Silverman Specialization Theorem states that the ranks of the Mordell-Weil groups of the generic and special fibers of the associated jacobian fibration satisfy $rk(J_t(k)) \geq rk(J_\eta(k(B)))$ for almost all t .

I will discuss work in progress towards showing that the above inequality is strict for infinitely many $t \in B(k)$, i.e., such that $rk(J_t(k)) \geq rk(J_\eta(k(B))) + 1$. This is motivated by preceding work on the case $g = 1$. This is work in progress with M. Hindry and A. Pacheco.