



TATE-SHAFAREVICH GROUP UNDER RELATIVE FROBENIUS MORPHISMS

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Time: 14:30-15:30, Thursday, May 23rd, 2019

Venue: Room 446, Shanghai Center for Mathematical Sciences

Abstract: In this talk, I will first review some basics of the BSD conjecture and the Tate–Shafarevich conjecture, with an emphasis over function fields. Then I will introduce a partial finiteness result on the Tate–Shafarevich group, namely, the subgroup of the Tate–Shafarevich group trivialized by the relative Frobenius morphisms is finite.

$$b_i - \left(\sum_{j=1}^{i-1} a_{ij} x_j^{(k)} + \sum_{j=i+1}^n a_{ij} x_j^{(k)} \right)$$
$$\Delta y_i = \int_{x_i}^{x_{i+1}} \frac{a_{ii} y' dx - \left(\sum_{j=1}^{i-1} a_{ij} x_j^{(k)} + \sum_{j=i+1}^n a_{ij} x_j^{(k)} \right)}{y}$$
$$\int_{x_k}^{x_{k+1}} f(x, y) dx = \int_{x_k}^{x_{k+1}} y' dx = y(x)$$
$$\sqrt{(y_n + 0.5\tau k_1)^2 + (t_n + 0.5\tau)^2}$$