Speaker: Hsueh-Yung Lin (National Taiwan University)

Title: Dynamical filtrations

Time: May 24 (Tu.), 1:30-4:00pm (Beijing time)

Venue: Zoom Meeting 984 962 1397 (no password required)

Abstract: Let X be a compact Kähler manifold equipped with a biholomorphic self-map, or more generally a virtually solvable holomorphic group action. We introduce some filtrations on the space $H^{1,1}(X)$ of $(1,1)$-classes of X, which capture the trade-off between the positivity of Kähler classes and the negativity arising from the (mixed) Hodge–Riemann relations. These filtrations lead to new bounds of various dynamical invariants, only in terms of the dimension of X. The invariants that we will be focusing on are the polynomial growth of the pullback actions on $H^{1,1}(X)$ and the dynamical rank. This lecture is partly based on joint work with T.-C. Dinh, K. Oguiso, and D.-Q. Zhang.