

ASYMPTOTICS OF HERMITIAN–YANG–MILLS METRICS (AFTER KUANG–RU WU)

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Consider a compact complex manifold X and a holomorphic line bundle L over it, endowed with a positively curved hermitian metric. An old theme, going back to Hilbert, is to investigate asymptotic properties of the space of holomorphic sections of the line bundles L^k as k tends to infinity. Hilbert computed the dimension of the space of sections, but in the past 50 years more refined geometrical questions have been asked and answered. Following and generalizing these developments, Wu considers so called Hermitian–Yang–Mills metrics associated with the spaces of sections, and determines their limit as k tends to infinity.

The talk will introduce the relevant notions, discuss motivation, formulate Wu’s theorem and, if all goes well, indicate the approach to the proof.