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Seminar

Bergman kernel asymptotics for big and semi-positive line bundles

Professor Chin-Yu Hsiao
Academic Sinica, Taiwan

Abstract

Let L be a holomorphic line bundle over a compact complex manifold M and let L^k be the k-th power of L. If L is semi-positive and positive at some point, we show that the Bergman kernel of L^k admits a full asymptotic expansion on the set where L is positive, with the possible exception of a proper analytic variety of M. We also prove the asymptotics for big line bundles endowed with singular Hermitian metrics with strictly positive curvature current. In this case the full asymptotics holds outside the singular locus of the metric. This yields another proof of the Shiffman conjecture.

Date: 12 April 2018 (Thursday)
Time: 1:30pm – 2:30pm
Venue: Room 222, Lady Shaw Building,
              The Chinese University of Hong Kong, Shatin

All are Welcome