

國立中央大學數學系

專題演講

主講人：Mounir Hajli (台北理論中心(NCTS/TPE))

題目：The holomorphic analytic torsion associated to some singular metrics

時間：2014年1月9日(星期四) 2:30 p.m. ~ 4:00 p.m.

地點：中央大學鴻經館M 107室

摘要： I will give a brief overview of the Arakelov geometry as developed by Gillet, Soulé and Bismut ([3]) and I will recall some elements of the classical spectral theory of Laplacians on compact Kähler manifold ([1]) and I will focus on the construction holomorphic analytic torsion ([2]).

The main goal of this talk is the extension of the classical spectral theory of Laplacians to a large class of singular metrics. As an application, I will consider the class of the canonical metrics on P^1 . These metrics are defined by the combinatorial structure of P^1 viewed as a toric manifold, but unfortunately they are singular. I will introduce the notion of "canonical" holomorphic analytic torsion in this situation and give some explicit computations.

Références

[1] Nicole Berline, Ezra Getzler, and Michèle Vergne. Heat kernels and Dirac operators. Grundlehren Text Editions. Springer-Verlag, Berlin, 2004. Corrected reprint of the 1992 original.

[2] D. B. Ray and I. M. Singer. Analytic torsion for complex manifolds. Ann. of Math. (2), 98 :154–177, 1973.

[3] C. Soulé. Lectures on Arakelov geometry, volume 33 of Cambridge Studies in Advanced Mathematics. Cambridge University Press, Cambridge, 1992. With the collaboration of D. Abramovich, J.-F. Burnol and J. Kramer.

敬 請 公 告 ， 歡 迎 參 加