



*Institute of Mathematical Research
Department of Mathematics*

GEOMETRY SEMINAR

On the L^p estimates and the L^p - cohomology of d and $\bar{\partial}$

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Abstract

During 1930–1940, W. Hodge established the theory of harmonic integrals for differential forms on compact Riemannian or Kähler manifolds. Since then, many people have tried to extend the Hodge theory to non-compact manifolds.

In this talk, we will present some recent work on the L^p -Hodge theory and the L^p -cohomology theory on complete Riemannian or Kähler manifolds. We establish some L^p -estimates and existence theorems for the Cartan-De Rham operator d and for the Cauchy-Riemann operator $\bar{\partial}$ on complete Riemannian or Kähler manifolds. Moreover, we prove some vanishing theorems of the L^p -cohomology on complete Riemannian or Kähler manifolds.

Date:	April 22, 2009 (Wednesday)
Time:	4:15 – 5:15pm
Place:	Room 517, Meng Wah Complex, HKU

Tea will be held in Room 516, Meng Wah Complex at 4:00pm

All are welcome