THE UNIVERSITY   OF HONG KONG

Institute of Mathematical Research
Department of Mathematics

COLLOQUIUM

The role of the canonical and pluricanonical bundles in complex and algebraic geometry

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Abstract

This colloquium is the introduction to a series of lectures to be given in the University of Hong Kong, in which under this heading we will give a panoramic view of the motivations, known techniques and methods, results, open problems, future directions, and ideas on how to proceed with the unsolved problems. The discussion will start from scratch, requiring minimal background knowledge. The plan is to include some of the following topics in the discussion (subject to time constraints): (i) Value distribution theory and hyperbolicity, from the viewpoint of log-pole jet differentials. (ii) Deformational invariance of plurigenera and pluricanonical Hodge decomposition. (iii) Construction of rational curves in Fano manifolds by singularity-magnifying Monge-Ampere equations. (iv) Effective results in algebraic geometry and the abundance conjecture. (v) Estimates of the complex Neumann problem and the Hodge conjecture for (p, q)-type in the setting of Cauchy-Riemann geometry.

Date:	June 26, 2015 (Friday)
Time:	4:00 – 5:00pm
Place:	Room 210, Run Run Shaw Bldg., HKU

All are welcome