

The Hong Kong University of Science and Technology

Department of Mathematics

Lecture Series

Complex Geometry

By

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Abstract

Lecture 1:	In this lecture I will discuss various aspects of some recent higher dimensional generalizations for the classical uniformization theorem of Riemann surfaces. The research in this direction has remained as one of the major interests in Several Complex Variables and Complex Geometry. The content and discussions will be addressed at a level accessible to the graduate students.
	Title: On the generalization of the Riemann Mapping Theorem Date: Thursday, 7 December 2017 Time: 3:00pm – 4:00pm Venue: Room 3494 (near Lifts 25 & 26)
Lecture 2:	I will give a survey of some old and new results concerning the curvature of Kahler metrics and Rationality (i.e. rationality, unirationality, uniruledness, rational connectedness, etc) of projective manifolds. An effort will be made so that some of the content is accessible to the graduate students. Title: Curvature and Rationality of Complex Manifolds Date: Thursday, 14 December 2017 Time: 3:00pm – 4:00pm
Lecture 3:	Venue: Room 3494 (near Lifts 25 & 26) We will start with a discussion about an elementary result due to Ahlfors connecting holomorphic sectional curvature and the classical Schwarz lemma. Some applications of the Ahlfors-Schwarz lemma to the Hermitian manifolds with non-positive holomorphic sectional curvature will be demonstrated. Old and recent results in this direction will be surveyed and discussed. An effort will be made so that part of the content is accessible to the graduate students. Title: Hermitian manifolds with non-positive holomorphic sectional curvature Date: Thursday, 21 December, 2017 Time: 3:00pm – 4:00pm Venue: Room 3494 (near Lifts 25 & 26)

All are welcome!