



The Hong Kong University of Science and Technology

Department of Mathematics

Seminar on PDE

Recent developments on Nirenberg problem

By

Prof. Jingang XIONG
Beijing Normal University

Abstract

In 1969-1970, L. Nirenberg raised the problem: Which function K is the Gaussian or Scalar curvature of a conformal metric to the standard one on the unit sphere? This problem is equivalent to solving a critical elliptic equation with variational structure. Tremendous progresses have been made over the 50 years. I will give a brief review of classical results on Nirenberg Problem and also results on analogues for Q curvatures. I will present my joint work with Tianling Jin and Yanyan Li, which gives a unified approach to those results and provides solutions of Nirenberg type problems of higher or fractional orders. A new major input is the blow up analysis via Green's representation.

Date : *Friday, 9 February 2018*

Time: *3:00 p.m. – 4:00 p.m.*

Venue: *Room 3472, Academic Building
(near Lifts 25&26), HKUST*

All are welcome!