

清華大學數學系訪問學者學術演講

NTHU Department of Mathematics

Visiting Scholar Colloquium

講題 The Q-prime curvature equation in CR geometry of real dimension three

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地點 綜合三館4F Lecture Room B

茶會 9:30, R707

Abstract

I plan to discuss the recently introduced notion of Q-prime curvature equation. A basic result in real dimension three when the underlying CR structure satisfy the two CR invariant conditions: the CR conformal Laplacian is a positive operator, and the CR Paneitz operator is non-negative, then the total Q-prime curvature is bounded from above by that of the standard 3-sphere, and equality holds if and only if the CR structure is biholomorphic to the standard 3-sphere. There are two proofs of this result, first one using the positive mass theorem, while the second one is "elementary". I will outline the two different approaches.