THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

SEMINAR ON PDE

Harmonic maps with finite hyperbolic distances to the Extreme Kerr

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<u>Abstract</u>

We study harmonic maps with finite hyperbolic distances to the Extreme Kerr from domains in the 3d Euclidean space to the hyperbolic plane. We prove that such maps have unique tangent maps at the black hole horizon. This particularly completes the regularity problem of harmonic maps arising from stationary axi-symmetric solutions of the Einstein vacuum field equations with multiple black holes, dating back to Weinstein 1989 and Li-Tian 1992. This is joint with Q. Han, M. Khuri and G. Weinstein.

Date: 6 February 2024 (Tuesday)

Time: 1:30pm – 2:30pm

Venue: Room 3472 (Lifts 25/26)

All are Welcome!