



THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

SEMINAR ON PDE

**Frankel property and Maximum Principle at Infinity
for complete minimal hypersurfaces**

Prof. Jose M. Espinar
Universidad de Cadiz, Spain

Abstract

We extend Mazet's Maximum Principle at infinity for parabolic, two-sided, properly embedded minimal hypersurfaces, up to ambient dimension seven. Parabolicity is a necessary condition in dimension $n \geq 4$, even in Euclidean space, as the example of the higher-dimensional catenoid shows. Next, inspired by the Tubular Neighborhood Theorem of Meeks-Rosenberg in Euclidean three-space we focus on the existence of an embedded ϵ -tube when the ambient manifold M has non-negative Ricci curvature. These results will allow us to establish Frankel-type properties and to extend the Anderson-Rodriguez Splitting Theorem under the existence of an area-minimizing mod(2) hypersurface Σ in these manifolds M (up to dimension seven), the universal covering space of M is isometric to $\Sigma \times R$ with the product metric.

Date: 26 October 2023 (Thursday)

Time: 4:30pm

Zoom Meeting: <https://hkust.zoom.us/j/94135776085> (Passcode: 794539)

All are Welcome!