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THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

SEMINAR ON PDE

Some results on harmonic maps with free boundary and beyond

By

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Abstract

The theory of harmonic maps with free boundary is an old topic in geometric analysis. I will report on recent results on their Ginzburg-Landau approximation, regularity theory, and their heat flow. I will also describe several models in the theory of liquid crystals where the heat flow of those maps appears, emphasizing on some well-posedness issues and some hints on the construction of blow-up solutions. Several important results in geometric analysis such as extremal metrics for the Steklov eigenvalues for instance make a crucial use of such maps. I'll give some open problems and will try to explain how to attack few open questions in the field using tools recently developed.

Date : 8 October 2021 (Friday)

Time : 9:00am

Zoom Meeting : https://hkust.zoom.us/j/93949653207 (Passcode: 405755)

All are Welcome!