

### THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

## **Department of Mathematics**

# **SEMINAR ON PDE**

### **Open problems and new directions on harmonic maps**

#### **Prof. Yannick Sire**

Johns Hopkins University

#### <u>Abstract</u>

I will describe recent progress related to harmonic maps: regularity, existence, free boundaries and qualitative properties. After recalling the main aspects of the classical theory, I will emphasize in the latest developments, in particular in the field of harmonic maps with free boundaries. Even though there has been some better understandings recently of such objects, several important aspects remain still open: their regularity, the link with cone-edge surfaces, their heat flow, among other topics. I will spend much time describing such issues.

> Date: 24 July 2023 (Monday) Time: 2:00pm Venue: Room 3494 (near Lifts 25/26)

> > All are Welcome!