**THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY**

## Department of Mathematics

# PHD STUDENT SEMINAR

## An analytical approach to the curvature dependent chiral domain wall velocity

By

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### Abstract

It is observed in experiments that changing the sign of the curvature of a nanowire changes the speed of domain walls dramatically. However, a satisfying explanation of the relationship between the domain speed and curvature is still lacking. Current driven domain wall motion in curved nanowire is investigated using LLG equation in general coordinates (then use it to obtain the equation for the cylindrical nanowire) and micromagnetic simulation which includes the Dzyaloshinskii-Moriya Interaction and spin orbit coupling effect.

**Date** : **7 May 2022 (Saturday)**
**Time** : **3:00pm**
**Zoom Meeting** : https://hkust.zoom.us/j/91352786522 **(Passcode: 234866)**

*All are Welcome!*