



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

**Department of Mathematics**

**SEMINAR ON APPLIED MATHEMATICS**

**Geometry of control regions-observable sets  
and weak observable sets**

**By**

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**Abstract**

In this talk, we will present the characterizations of the observable sets and the weak observable sets, which correspond to the observability inequality and the weak observability inequality, respectively. The former is equivalent to the null controllability, while the latter and is equivalent to the stabilization. The systems under consideration contain the heat-like equations and the Schrodinger equations in  $\mathbb{R}^n$ . Such characterizations are related to the thick and weak-thick sets in uncertainty principle. We also show how potentials in the equations affect the geometry of control regions.

**Date : 28 June 2023 (Wednesday)**

**Time : 11:00am – 12:00nn**

**Venue : Room 5501 (Lifts 25/26)**

*All are Welcome!*