



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

**Department of Mathematics**

**SEMINAR ON APPLIED MATHEMATICS**

**Characterization of complete stabilizability for  
linear systems**

**By**

**Prof. Gengsheng WANG**  
Tianjin University

**Abstract**

In this talk, we present a sufficient and necessary condition ensuring the complete stabilization for a linear control system  $[A, B]$ , where  $A$  generates a semigroup on a Hilbert space  $X$ , and  $B$  is a linear and bounded operator from another Hilbert space  $U$  to  $X$ . This condition is characterized by some weak observability inequalities. The result is extended to the case where  $B$  is unbounded. Some applications are given.

**Date : 30 June 2023 (Friday)**

**Time : 11:00am – 12:00nn**

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

*All are Welcome!*