



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

**Department of Mathematics**

**SEMINAR ON PURE MATHEMATICS**

Mining for modular data  
from congruence representations

by

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**Abstract**

Modular fusion categories (MFCs) arise naturally in many areas of mathematics and physics. Associated with an MFC is a pair of complex matrices, called modular data, which are arguably the most important invariants of an MFC. The modular data of an MFC generate some uncanonical congruence representations of  $SL(2, \mathbb{Z})$ . In this talk, we will discuss how modular data could be reconstructed or discovered from congruence representations of  $SL(2, \mathbb{Z})$ . The talk is based on a joint work with Eric Rowell, Zhenghan Wang and Xiao-Gang Wen.

**Date : 24 May 2024 (Friday)**

**Time : 4:30pm – 5:30pm**

**Venue : Room 1410 (near Lift 25/26)**

*All are Welcome!*