ICTS Group Theory and Representation Theory Seminar

Title : Word maps and their images on finite groups

Speaker : Shrinit Singh (ICTS-TIFR, Bengaluru)

Date : Tuesday, 16 September 2025

Time : 11:30 AM (IST)

Abstract : In this talk, we explore the following question about words in free groups: if two words induce identical images as word maps on every finite group, must they be endomorphic to each other? This leads to the concept of weak profinite rigidity, a property analogous to profinite rigidity of words. We illustrate this distinction with the example of the words x1 and $x^2_1 x_2 x_1^{-1} x_2^{-1}$ which have equal images but distinct measures on some finite group. Finally, we present recent progress establishing weak profinite rigidity for some words.

Venue : Feynman Lecture Hall