Speaker: Keerthi Pera

Title: The irreducibility of the moduli of polarized $K3$ surfaces

Abstract: We show that the moduli of polarized $K3$ surfaces of fixed degree is irreducible in characteristic $p > 2$. The key idea is to exhibit p-Hecke correspondences between the ordinary loci of moduli spaces of different degrees and so reduce to the case where the degree is not too divisible by p. For the construction of these correspondences, we make crucial use of the Kuga-Satake correspondence in characteristic p.