ICTS Seminar

Title : Fundamental group schemes of Hilbert scheme of n points on a surface

Speaker : Arjun Paul (Indian Institute of Technology Bombay)

Date : Tuesday, 29 September 2020

Time : 03:30 pm (IST)

Abstract : Varieties or more generally schemes defined over a field play important roles in algebraic geometry. In contrast to manifold topology, varieties are naturally endowed with Zariski topology, which are somehow quite smaller compared to manifold topologies, but still most of the time, they are good enough to work in algebraic situations. In SGA1, Grothendieck introduced the notion of étale fundamental group as a substitute of topological fundamental group for algebraic varieties. In later times, many people have developed more and more general kinds of fundamental groups, which are usually group schemes, and reflect interesting geometries of the ambient varieties. The Hilbert scheme of n points on a smooth projective surface X defined over an algebraically closed field k is one of the important and well studied varieties in algebraic geometry. In a joint work with Ronnie Sebastian, we find the S-fundamental group scheme and Nori's fundamental group scheme of the Hilbert scheme . In this talk, we discuss along this direction.

Venue : Online Seminar

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