School of Mathematics
Tata Institute of Fundamental Research

21 November, 2023

Ph.D. Thesis Defense

Speaker	:	***Mohit Upmanyu***
Title	:	***Formal geometry of singularities***
Date & Time	:	***Wednesday, 22 November, 2023 at 11.30 A.m.***
Venue	:	**Lecture Room (A369) as well as via Zoom**

Abstract

We define when a subset of the formal power series ring is called an AmAC, prove some elementary properties of AmAC, and use them to prove the following theorem:

Fix K an uncountable algebraically closed field and fix $A = K[[x_1, x_2, ..., x_n]]$. Let X be an irreducible subvariety of $Spec(A)$ and further assume X is not embedded in any hyperplane. Let H_i be a sequence of hyperplanes in $Spec(A)$ such that the dimension of the singular locus of $X \cap H_i$ is d, and multiplicity of the singular locus tends to infinity as i tends to infinity. Then there is a hyperplane H such that the singular locus of $X \cap H$ is of dimension $> d$.

Anuradha Prajapati

Zoom Link and Credentials

`https://tifr-res-in.zoom.us/j/97772038607`

Meeting ID: 977 7203 8607

Passcode: 127256