NPTEL Video Course - Mathematics - Basic Algebraic Geometry : Varieties, Morphisms, Local Rings, Function Fie

Subject Co-ordinator - Dr. T.E. Venkata Balaji

Co-ordinating Institute - IIT - Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 30 - The Formula for the Local Ring at a Point of a Projective Variety Or Playing with Localisations
Lecture 31 - The Field of Rational Functions or Function Field of a Variety - The Local Ring at the Generic P
Lecture 32 - Fields of Rational Functions or Function Fields of Affine and Projective Varieties and their Rel
Lecture 33 - Global Regular Functions on Projective Varieties are Simply the Constants
Lecture 34 - The d-Uple Embedding and the Non-Intrinsic Nature of the Homogeneous Coordinate Ring of a Projec
Lecture 35 - The Importance of Local Rings - A Morphism is an Isomorphism if it is a Homeomorphism and Induce
Lecture 36 - The Importance of Local Rings - A Rational Function in Every Local Ring is Globally Regular
Lecture 37 - Geometric Meaning of Isomorphism of Local Rings - Local Rings are Almost Global
Lecture 38 - Local Ring Isomorphism,Equals Function Field Isomorphism, Equals Birationality
Lecture 39 - Why Local Rings Provide Calculus Without Limits for Algebraic Geometry Pun Intended!
Lecture 40 - How Local Rings Detect Smoothness or Nonsingularity in Algebraic Geometry
Lecture 41 - Any Variety is a Smooth Manifold with or without Non-Smooth Boundary
Lecture 42 - Any Variety is a Smooth Hypersurface On an Open Dense Subset