

CASTS Algebraic Geometry Summer Program

An introduction to etale morphisms

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11:30 - 12:30

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The goal of this talk is to present some basic properties of etale morphisms. Firstly, we will define what an etale morphism is and give some equivalent statements of the definition. Here are two main results we want to demonstrate in this talk:

- (1) A theorem due to Chevalley gives a necessary and sufficient condition of when a morphism is etale at a given point.
- (2) To deduce the Jacobian criterion, we will investigate a more general theorem and then conclude the Jacobian criterion as a corollary. Some other properties will be stated without proofs if they are necessary for us to prove the main results.

