

# Introduction to deformation theory in algebraic geometry

Gufang Zhao

## Abstract:

This talk consists of something I am learning. After a brief discussion of the motivation and basic ideas of deformation theory, I will talk about functors of Artin local rings and introducing the notion of pre-deformation functors, their geometric meaning, and examples from applications. At last, as a well-studied special case, I will talk about tangent spaces and obstruction theory for deformations of smooth varieties.