

This bachelor's thesis aims to provide accessible treatment of the blow-up construction for algebraic varieties. The blow-up construction is a fundamental technique in algebraic geometry that allows us to find a variety which has better properties than an original variety but is still equivalent to the original. This process can be used to resolve singularities. In the first two chapters, we begin by providing an introduction to the fundamental principles of algebraic geometry, including the definitions of algebraic varieties but also basic topological concepts but also some construction such as Segre embedding and product of varieties. In the third chapter, we will introduce the concept of blow-ups and show the computation as on example.