

9.1 Introduction Morphology, or morphology for short, is a branch of image processing which is particularly useful for analyzing shapes in images.

9.2 Basic ideas The theory of mathematical morphology can be developed in many different ways.

Reflection If S is set of pixels, then its reflection, denoted S^* , is obtained by reflecting in the origin: For examples, in figure 9.2, the open and closed circles form sets which are reflections of each other.

We shall develop basic morphological tools for investigation of binary images, and then show how to extend these tools to greyscale images.

Translation Suppose that S is a set of pixels in a binary image, and p is a particular coordinate point.