# Introduction

Digital image processing can be defined as processing of digital images captured by digital imaging systems with the use of computer algorithms. Image processing is done to improve the quality of the captured images or to analyze them in a myriad of applications. There are six fundamental steps in image processing.

Image acquisition – acquiring the images in the digital form

Image enhancement – enhancing the obscured details or highlight features that are of interest in an image

Image restoration – improving the appearance of the image based on mathematical models of image degradation

Color image processing – color modelling and processing in the digital domain

Wavelets and Multiresolution Processing – subdividing images successively for data compression and for pyramidal representation

Compression – reducing the size of the images preserving the quality