

Abstract

The image information plays prominent role in modern society and shape analysis becomes more and more popular over the past few decades. By referring to literatures and using some other methods, this report purposes several statistical methodologies and algorithms on Riemannian manifold to solve three main questions, which are given a(or more) data set(s) of specimens, how to find the mean shape, what is the variation in the shape space and how to compare different shapes between two data sets.