**3D Face Recognition Under Expressions,**

**Occlusions and Pose Variations**

**Proposed work**

This paper proposes a Riemannian framework for 3D facial shape analysis This framework is based on elastically matching and comparing radial curves emanating from the tip of the nose and it handles several of the problems that is described on the existing work. It extracts, analyzes, and compares the shapes of radial curves of facial surfaces. It develops an elastic shape analysis of 3D faces by extending the elastic shape analysis of curves to 3D facial surfaces. To handle occlusions, it introduces an occlusion detection and removal step that is based on recursive-ICP. To handle the missing data, it introduces a restoration step that uses statistical estimation on shape manifolds of curves. Specifically, it uses PCA on tangent spaces of the shape manifold to model the normal curves and uses that model to complete the partially-observed curves.