

We study 3D scene reconstruction from stereo pictures. First, we describe methods for computing fundamental matrix from a set of corresponding image points. Using this matrix we can obtain a projective 3D reconstruction. The second part deals with techniques of refining the projective reconstruction to metric one. We focus especially on that one, which uses an essential matrix. Furthermore we discuss the possibilities of surface reconstruction from a given point cloud. The last part includes some details of an implementation and presents its results.