COMP70058 Computer Vision

Tutorial 5 - Computational Stereo

Two cameras are placed at positions CL=[-5,0,0] and CR=[5,0,0] and both face in direction [0, 0, 1].

1.   Two feature points are identified on one image plane as [5,0] and [-4,0], the origin being at the centre of the image plane. What are the epipolar lines corresponding to these two points?

2.   A point on an object has 3D position Pi=[Xi,Yi,Zi]. Derive an expression for the epipolar plane where point Pi lies.

3.   If the image plane of projection lies in the plane Z=7, extract the equation of the epipolar line that appear in the left image.