



Computational Vision and Biological Perception

Biomedical Engineering
University of Coimbra

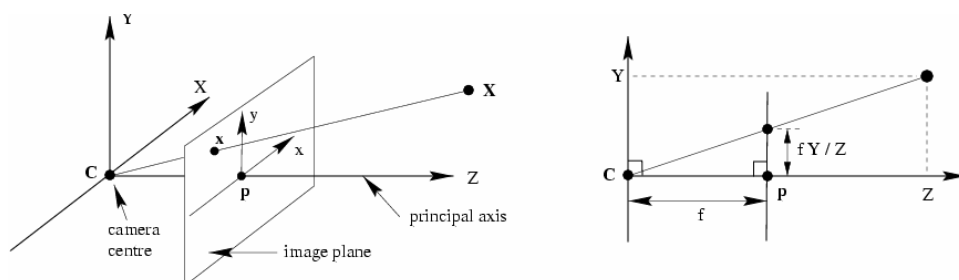
Exam - Computational Vision (6 points)

3/Julho/2006

Max Duration - 1 hour

Question 1:

Deduce the matrix version of the mathematical relation between an image point x and a world point X . Use the figure below as a reference:

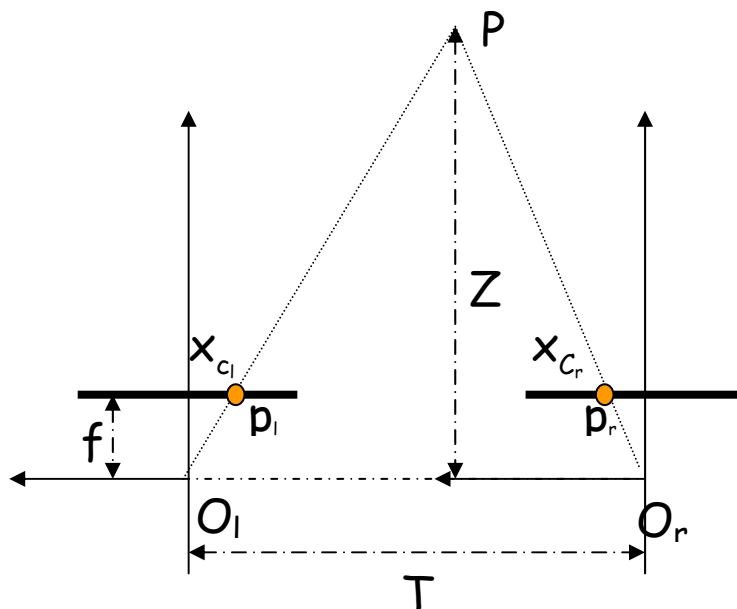


Question 2:

The differential computation of optical flux in images suffers from the “effect of aperture”. Describe this effect, giving examples.

Question 3:

Deduce the expressions for computation of depth (distance in respect to the baseline), from a point P in the world and its corresponding stereo images p acquired with a stereo set of fronto parallel cameras. Use the figure below as a reference.



END