Exam Thursday March 7

16-1

~~x~~ 1 hour x 75 minutes !!

through today's lecture

1 page notes

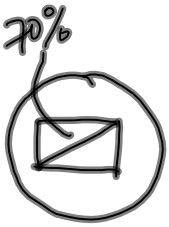
topics

camera architecture

optics - distortion

focal plane - CCD

inch designation



SEE ABOVE CORRECTION ON LENGTH OF EXAM TIME.

Feb 28-4:22 PM

16-2

perspective geometry

rotations, rot. matrix - euler angles

collinearity equations ↑↓

linearize NL equation

trunc. taylor series

analytical partial derivs

matlab symbolic

numerical approximation

NO L.S.

} solve by Newton Iteration

Feb 28-4:22 PM

16-3

Resection, intersection
2D conformal (4-par)
(6-par)
8-parameter
rectification problem
collinearity + DEM : orthorectification
interpolation NN, BL, BC
BBA :
R/O : coplanarity model + 8 pt. alg.
Abs. Or. 7-parameter

Feb 28-4:22 PM

16-4

lens distortion model
radial
decenter
in-plane
epi.- polar plane
line

Feb 28-4:22 PM

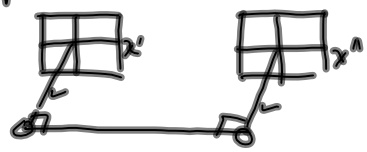
normalization: pairwise rectification (image)

16-5

chpt. 7

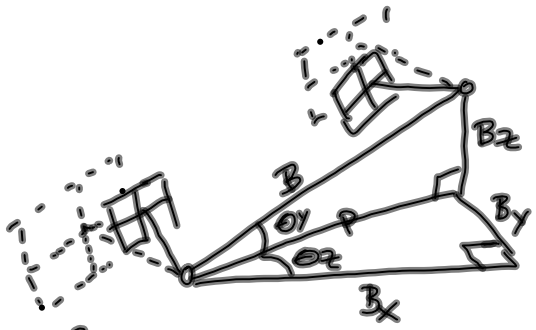
normalized image pair

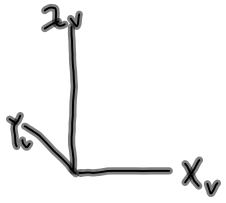
1. same f
2. optical axes ||
3. opt. axes ⊥ base
4. x-axes || to base



Feb 28-4:22 PM

16-6





$P = \sqrt{B_x^2 + B^2}$

$\theta_z = \tan^{B_y}/_{B_x}$

θ_y

Feb 28-4:23 PM