Benha University
Faculty of Engineering - Shoubra
Surveying Engineering Department
Fourth Year



Year: 2017/2018 Semester: Second Advanced Photogrammetry

Assignment No.: 4

Q1. State the theory and mathematical model of least-square matching. Mention how to generate initial values of unknown parameters in this technique.

- Q2. Regarding Q2 of Assignment 3, and after reaching the integer position of maximum normalized correlation coefficient,
 - a) Compute the optimum sub-pixel position of the template window by estimating its translation with respect to the matching window using the technique of least-squares matching, ignoring the radiometric differences between the two windows.
 - b) Compute the optimum sub-pixel position of the template window by estimating its translation with respect to the matching window using the technique of least-squares matching, considering the radiometric differences between the two windows.
- Q3. Regarding Q4 of Assignment 3, and after reaching the integer position of maximum normalized correlation coefficient, compute the optimum sub-pixel position of the template window by estimating its translation with respect to the matching window using the technique of least-squares matching, considering the radiometric differences between the two windows.