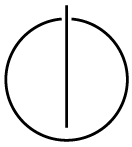

Multiple View Geometry: Exercise Sheet 9

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http://vision.in.tum.de/teaching/ss2014/mvg2014

Exercise: June 23nd, 2014

Part II: Practical Exercises

In this exercise you will continue with the implementation of direct image alignment on SE(3) (Exercise 7). You can either use the provided solution on the website, or use your own. We recommend that you finish Exercise 1 to 4 from Sheet 7.

1. Implement Huber weighting, in order to make your Solution robust to outliers. Use GIMP to add some ”outliers” to the images, and test your implementation. You will have to implement iteratively re-weighted least-squares (see Wikipedia).

2. Adapt your solution to use **gradient descend** instead of Gauss-Newton to minimize the error function. What is a good stepsize?

3. Adapt your solution to use the **Levenberg-Marquad** Algorithm for minimization.