# 16-720 Computer Vision Spring 2016

# Azarakhsh Keipour (akeipour@andrew) Assignment 4

## Q 2.1 8-Point Algorithm

The calculated fundamental matrix F using 8-point algorithm is:

-0.0000 0.0003 -6.3885

0.0008 -0.0000 -0.0743

6.1527 -0.0402 24.5403

The result of the 8-point algorithm visualized using the provided displayEpipolarF tool is shown in Fig. 1.

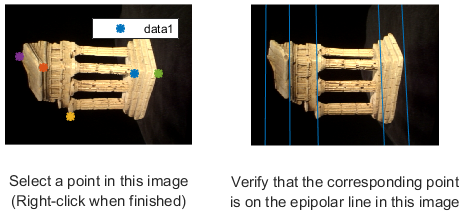


Figure 1. The result of finding correspondences using 8-point algorithm for estimating the fundamental matrix.

## Q 2.2 7-Point Algorithm

There are 3 calculated fundamental matrices for each set of points. For the correspondences selected by me using the cpselect tool (points are shown in ‘test\_q2.m’ file), the 3rd fundamental matrix (F{3}) gives the best results. This matrix is:

0.0000 0.0000 -0.0008

-0.0000 -0.0000 0.0001

0.0008 -0.0001 -0.0038

The result of the 7-point algorithm visualized using the provided displayEpipolarF tool on some points is shown in Fig. 2.

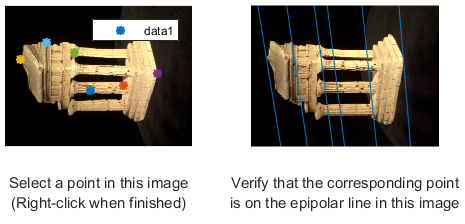


Figure 2. The result of finding correspondences using 7-point algorithm for estimating the fundamental matrix.

## Q 2.3