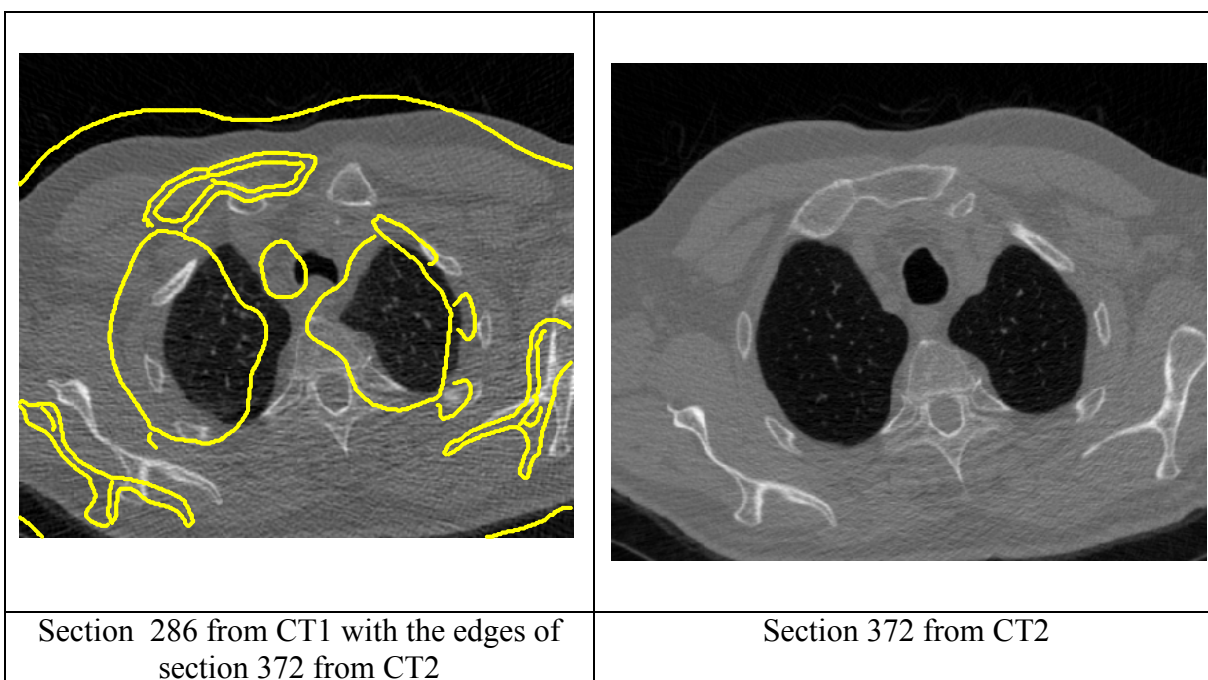


Spatial image registration

The purpose of this work is to familiarize the student with 2D geometric transformations, point homography and raw medical image handling.

Two CT clinical studies of the same patient are provided.

1. Import the .raw files, using the information provided in the corresponding .mha files
2. Select transverse sections 286 and 372 from CT1 and CT2 respectively.
3. Overlay the edges of section 372 on the Display of section 286. Describe your findings.
4. Select homologous pairs of points on the two sections, on regions with minimal elastic deformation.
5. Calculate the matrix of the affine geometric transformation that best matches the selected points of section 372 with the points on section 286.
6. Apply the transformation from step 5 to section 372.



Συναρτήσεις του Matlab που πιθανώς σας χρειάζονται:
fopen, fread, fclose, getpts, edge, plot

Instructions

You should submit the following using the e-class (not by email):

The source code, with clear comments and a report with all your results, as well as detailed explanations.

The source code should execute and produce identical results with the ones submitted. You may use functions from software libraries. You may be orally examined over your code and results, so, do not use functions / parts of source code you do not understand