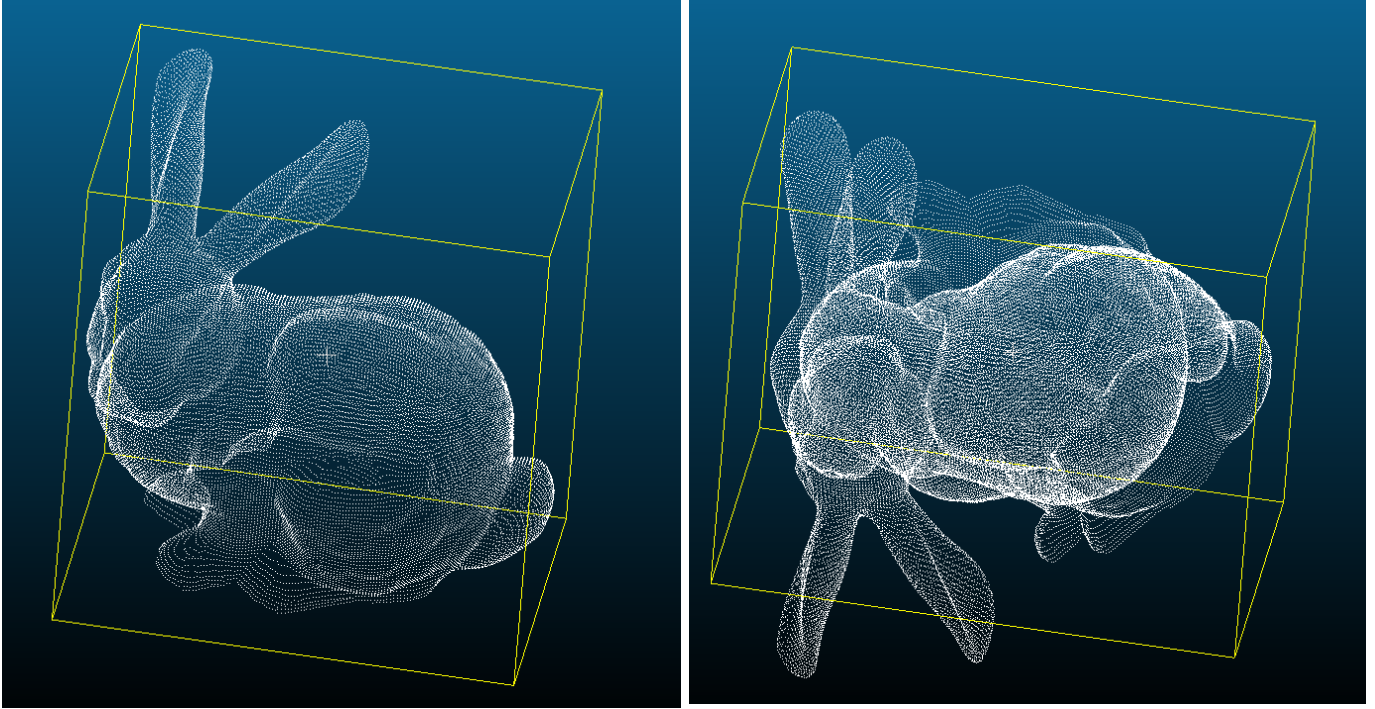
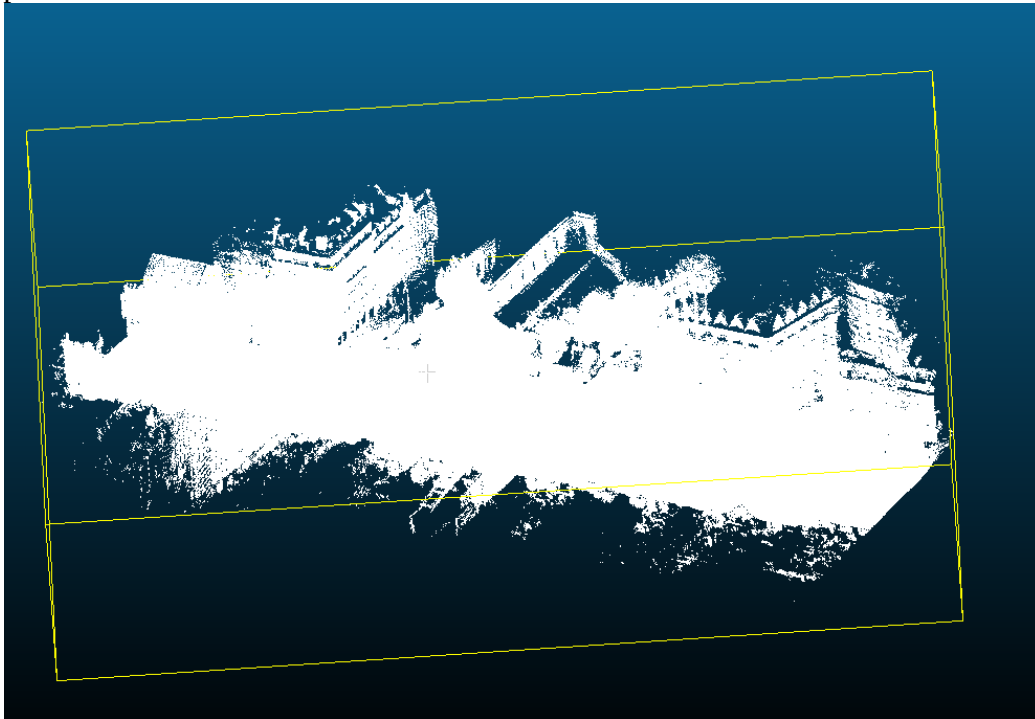


Question 1 :

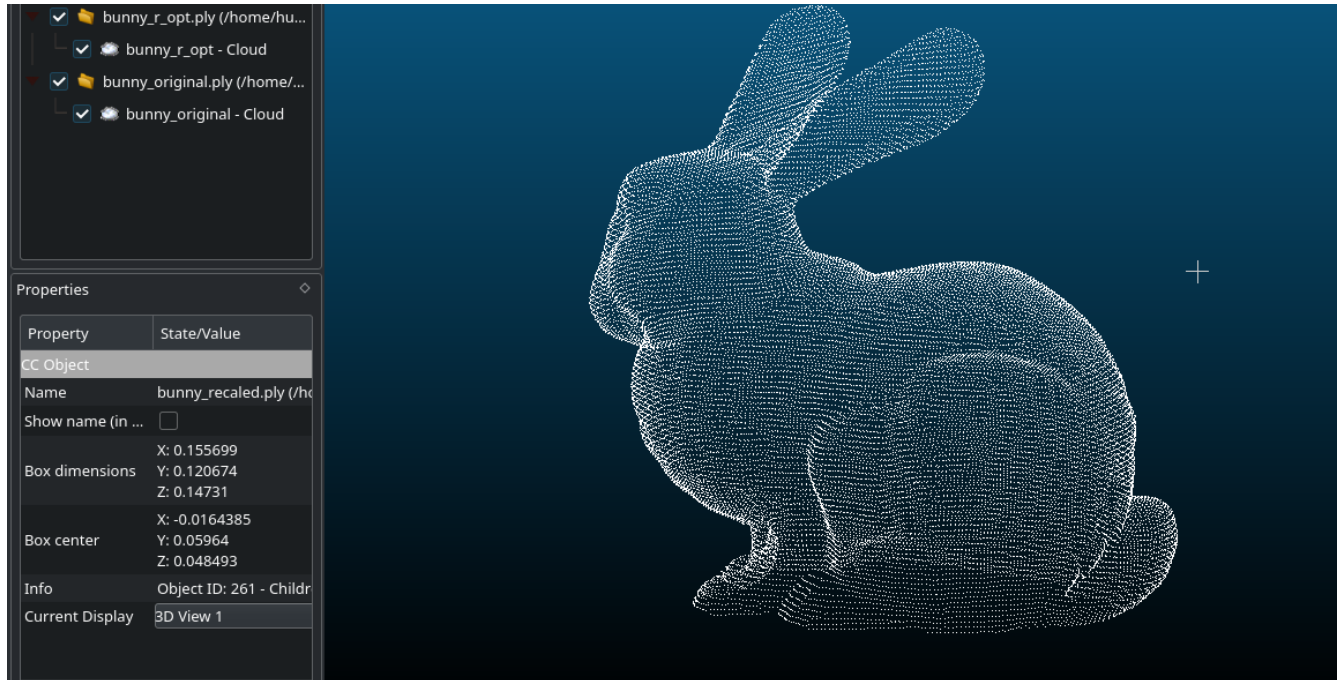


ICP is able to realign clouds when the bunny is only disturbed, not returned.
For alignment in Notre-Dame-Des-Champs, it is necessary to use the largest cloud as reference so that they aren't points that aren't matched.



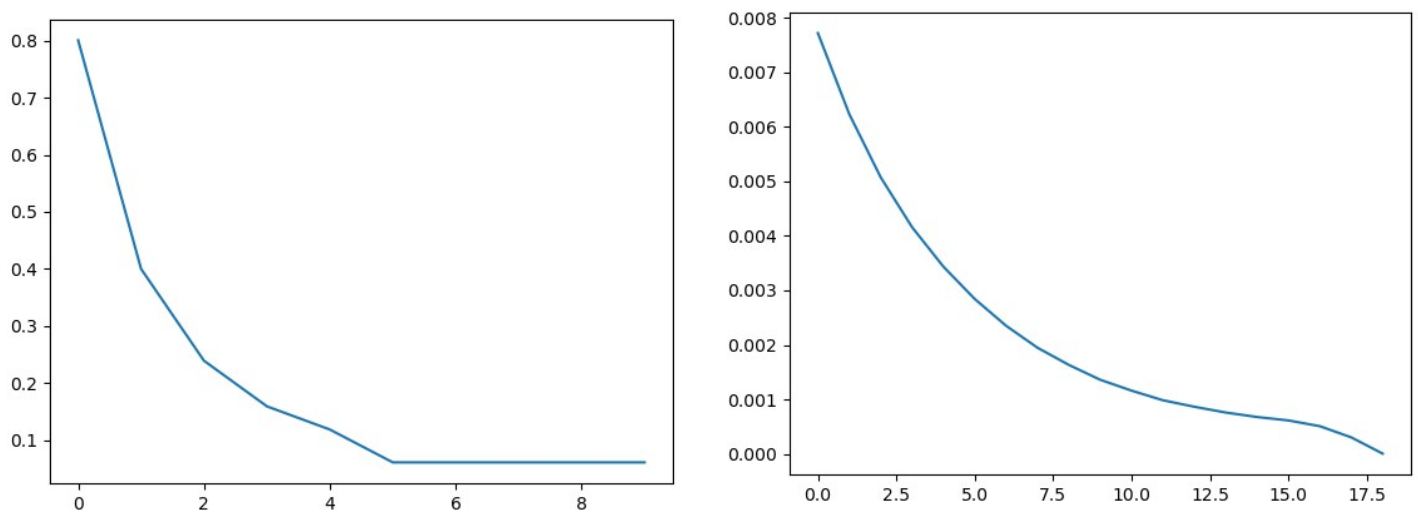
Question 2 :

Before the alignment, the RMS was of 0,161, whereas after the clouds were aligned, it was equal to 0. This method gives better results on the bunnies because the points of the meshes are numbered.



For instance, it wouldn't work on the Notre-Dame-des-Champs mesh, because we don't have that assumption (the meshes don't even have the same number of points).

Question 3 :

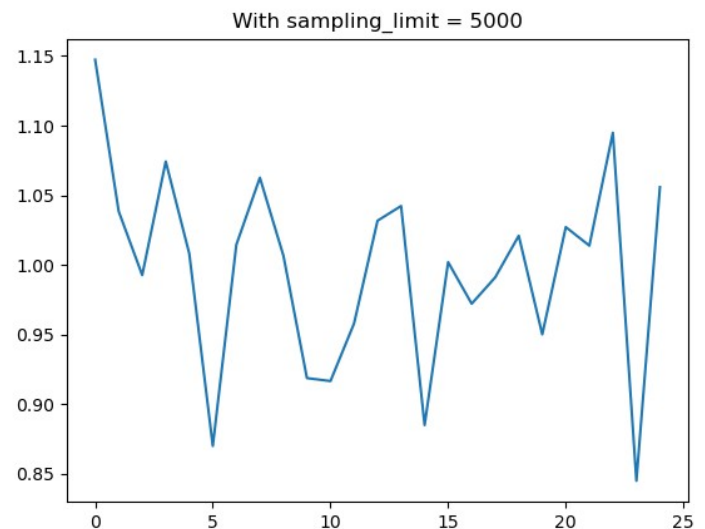
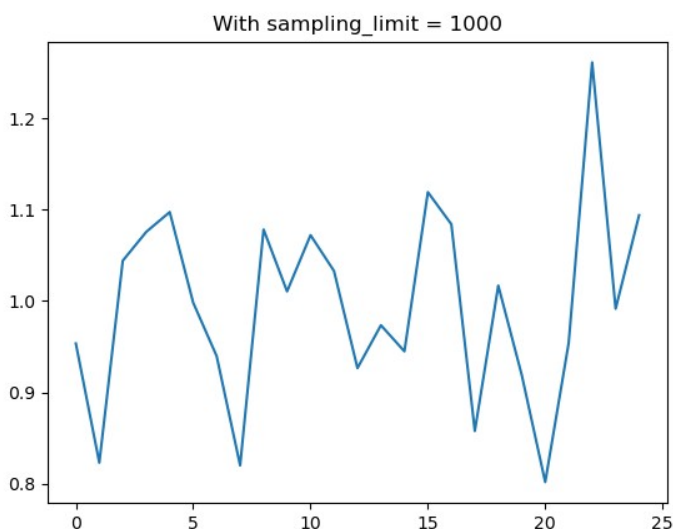


On the left, the 2D example, and on the right, the bunny.

Question 4 :

In both cases, the algorithm is able to converge to a very good solution. We can see that increasing the number of points also increases the number of iterations required.

Question 5 :



Augmenting the number of points used seem to have an impact on the convergence, as it is decreasing more distinctly (seen on other attempts as well).

However, increasing the number of maximum steps doesn't improve the results much : the RMS remains fairly high (close to 1, which isn't that great but is still better than the RMS given by CloudCompare, 1,36).

