Session 15

During this session I supported the manufacture of the door to open, now once the handle is in place all the previous calculations will be simplified.

The point of interest being defined, we will be content to operate all the parts of the arm in collaboration to reach it.

Furthermore, I added the gripper arm junction, also equipped with a servomotor, and having to simulate a rotational movement of 180°, the calculation had to be redone by including it. It is obviously not part of any of the axes predefined before.

The elbow and the forearm according to (X, Y).

The basis according to (X, Z).

The arm-clamp junction according to (Y, Z), but before setting up the expression of the phi angle, we modelled a part in order to reinforce the attachment between the arms and the somewhat fragile clamp.

Then given the similarity of the base movement, by analogy we define the angle of rotation according to the same relation.

Nevertheless, the calculation becomes more and more complex, and we are still working on the implementation of a global rotation matrix, we also encounter temporal dysfunctions once a new axis of rotation has been added.

As for the clamp, it is easy to control its movement using a potentiometer, but in order to establish a mathematical logic expression to follow according to the position to be reached, I have to learn more about inverse kinematics.