

## Swim abstract: Image derived contractor and its application in robot localization

In the field of robotics, localizing itself greatly simplify the control of the movement of the robot. Generally speaking, there is a relationship between the pose of the robot, the data from sensors and the map. This relationship allows us to contract the position. We decided to represent a map using a binary image. In fact, this approach allows us to represent any kind of map. Then we created a contractor on this image i.e. a contractor that returns the smallest box containing the entire input box white pixel. The efficiency of this contractor was tested in the context of a dynamic localization using experimental dataset taken by the AUV Ictineu from Girona University.