

ABSTRACT

Ball on Plate is a tool that serves as a regulator of the ball's position on a horizontal plane, where the location of the ball can be set, but in this project, position is set in the middle of the field.

The initial position of the ball is the most important thing, because the initial ball position is the starting point of reference the tool can work. After obtaining the initial position, Ball on Plate system will work using fuzzy logic controller which controls the whole of the motor system. The system uses a version of Arduino Microcontroller Mega2560, and Servo Motors as actuators. The monitoring position of the system uses Visual studio with web camera.

In this study, ball on plate can work properly by using the seven areas of linguistics at each input and uses Sugeno model with singleton for the output. And is able to move the ball to the center of the plate within the range of zero to three seconds.

Keywords: Ball on Plate, Arduino, Visual Studio, camera, servo motor and Fuzzy Logic