ABSTRACK

Seesaw is a game made of straight board and have a fulcrum at the middle position if the one of side up the other side will go down. This game is usually found in the playground. Playing the seesaw is the kids sitting on the top of a seesaw, and then they bump the board alternately. This makes two sides can bump alternately. The purpose of a final project is the seesaw can control the speed when the two children have a different weight and then the speed of seesaw can stable. And the other side, a design of seesaw can bump automatic if only one of the child wants to play the seesaw.

In the final project, the automatic seesaw will be made a prototype. In this system use microcontroller, DC motor, and sensor rotary encoder. DC motor used as speed drive and rotary encoder sensor as a feedback system. The algorithm using the fuzzy logic method. In this method used to archive the result.

In the final project, an automatic seesaw designed can solve the difference of child's weight with a constant frequency swing. On response without weight, system response show when membership function error value larger, then settling time we obtainable more tacho. An automatic seesaw can play by the difference weight on two sides of a seesaw. System response will be constant to follow setpoint though there is the difference weight.

Keywords : speed control, sistem kontrol, fuzzy logic, rotary encoder