

Project Report Title : The Developer of Longitudinal Control of a Mono Wheel
Balancing
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Abstract

The purpose of this thesis. Design and development to maintain a balance with a single wheel. The development will be divided into two parts: the first part is the mathematical calculations about force and moment to design wheel well balanced, and the second part of the controller design and PID to compare. with a fuzzy logic controller and written to the microcontroller (Micro Controller) to control the balance wheel of the calculation and design in the first part. The experimental result, the fuzzy control has system response better than PID control and ON/OFF control valve suitable for position control than path planning control.

Result of the development and to maintain the balance with one wheel appeared. Can control the balance of the front and rear in the region identified by the use of microcontroller design and applied directly to the initial formula. Able to maintain a balance to the extent specified.