Juggernaut

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The juggernaut is a prototype of a robotic ground vehicle system that use a slide track sytem, capable of move on different surfaces, for diverse applications. The hypothesis was to create a mobile robot caterpillar traction but small and easy to use. The juggernaut is economical, easy to construct and to assemble. It was developed with the aim to make an economic and good quality mobile robot. In order to build the first prototype, we search materials that could be used, seeking for low price and resistant components. The structure of the prototype use the following elements: chains of a motorcycle engine as the bands, gear motorcycle as wheels, foamed PVC to build the body, bicycle spokes as axis, gear motor and a arduino uno for the control system. The prototype was subjected to various tests on land and of resistance. We conclude that it was possible to build a very strong structure that was able to pass on different surfaces even with a weight on it. The price of the prototype was only 1442.60 Mexican pesos.

Awards Won: