# Use of the Magnetic Field to Levitate a Car

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In this work we have studied the possibility of creating a more efficient transport vehicle that can reduce the use of petrolium and promote a rapid transportation. The use of a magnetic field to levitate a car, along with the use of a proper propulsion system, will allow a more efficient movement of the car, is the hypothesis to be verified. A magnetic straight track and a magnetic inclined track was constructed and different vehicles were designed. It was discovered that the vehicles in U form with an appropiate balance, considering their center of mass, levitate with the magnetic field. The force analisis on the vehicles were made and the velocity and acceleration of the vehicles on both tracks were tested to obtain the value of the friction force. The result confirms that the vehicles can move more efficiently than a regular cart because the friction force is minimun thanks to magnetic levitation.

**Awards Won:**