Análisis del comportamiento transitorio de un vehículo eléctrico accionado por motores de imán permanente [

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ABSTRACT In this paper a typical electric vehicle (EV) control system driven by an interior permanent magnet synchronous motor is described. First of all, the mechanical requirements that an EV imposes to its drive are described and explained. The construction, operational characteristics and advantages of an interior permanent magnet synchronous motor that justifies its widespread utilization as an EV drive are explained and justified. Afterward, the control strategy of an EV is exposed and justified. Finally, the Maximum Torque per Ampere (MTPA) control method of an interior permanent magnet synchronous motor is highlighted. Finally, a simulation of a car's electric vehicle driven with a permanent magnet synchronous motor is presented. Four typical scenarios of the operation of the car was selected and through the simulation of motor control system as a whole it was possible to predict the transient performance of the vehicle with the scenarios selected
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