

Simulation based study of electric vehicle parameters

ABSTRACT

As electric vehicle becomes a favorable alternative for sustainable and cleaner energy emission in transportation, modeling and simulation of electric vehicle has attracts increasing attentions to the researchers. Selecting appropriate parameters of electric vehicle and understanding their characteristics, are the preliminary step in modeling a good electric vehicle. This paper presents the study of vehicle parameters based on simulation of electric vehicle. Three different car segments are proposed for the simulation of three driving cycles. The simulations result demonstrates the significance of each segment parameters to the performance and fuel economy of electric vehicle. All works are performed in MATLAB/Simulink environment.

Keyword: Electric vehicle; Vehicle parameters; Segmentation; Simulation; MATLAB/Simulink