

## Modelling and simulation of battery electric vehicle by using MATLAB-Simulink

### ABSTRACT

Electric vehicles (EVs) are likely to be an alternative energy mode of transportation for the future as it has shown a great ability to reduce the consumption of petroleum based and other high CO<sub>2</sub> emitting transportations fuels. In this study, the components of the BEVs system were discussed and a model of BEV on the MATLAB-Simulink platform was simulated. Moreover, the relevant electrical system components as well as its corresponding equations for verification were identified. Furthermore, all simulation results were considered. This study presents a foundation for extra researches.

**Keyword:** Battery electric vehicle; Mathematical modeling; MATLAB-Simulink; Simulation