Abstract

This work is devoted to the modeling and simulation of hybrid electric vehicles with two sources of energy: a combustion engine and an electric motor. The Series / Parallel architecture is adopted for modeling, and each part of the traction is modeled separately. The constructed vehicle’s model for simulation consists of assembling different blocks by connecting components in a structured manner with respect of the physical causality. For the control of the powertrain, a strategy is developed, whose role is to choose at every moment the best power distribution between the different energy sources in order to minimize fuel consumption and pollutants emissions.

References


Index Terms

Computer Science

Applied Sciences

Keywords

Hybrid electric vehicle Simulation Modeling Control strategy Energy Management