عنوان مقاله:

An Intelligent Control Strategy in a Parallel Hybrid Vehicle

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خلاصه مقاله:

This paper presents a design procedure for an adaptive power management control strategy based on a driving cycle recognition algorithm. The design goal of the control strategy is to minimize fuel consumption and engine-out NOx, HC and CO emissions on a set of diversified driving schedules. Seven facility-specific drive cycles are considered to represent different driving scenarios. For each facility-specific drive cycle, the fuel economy and emission are optimized and obtained proper split between the two energy sources (engine and electric motor). A driving pattern recognition algorithm is subsequently developed and used to classify the current driving cycle into one of the facility-specific drive cycles; thus, the most appropriate control algorithm is adaptively selected. This control scheme was tested on a typical driving cycle and was found to operate satisfactorily.

کلمات کلیدی:
Hybrid vehicle, torque distribution, fuzzy rule base, neural network, drive cycle

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