The Development of an Optimal Control Strategy for a Series Hydraulic Hybrid Vehicle

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ABSTRACT

In this work, a Truck Class II series hydraulic hybrid model is established. Dynamic Programming (DP) methodology is applied to derive the optimal power-splitting factor for the hybrid system for preselected driving schedules. Implementable rules are derived by extracting the optimal trajectory features from a DP scheme. The system behaviors illustrate that the improved control strategy gives a highly effective operation region for the engine and high power density characteristics for the hydraulic components.

Keywords: control strategy; dynamic programming; modeling; rule-based; series hydraulic hybrid

REFERENCES

6. Kim, Y.;...