

Plenary Lecture



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Title: Research Progress of NEV Powertrain and Controls

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Abstract

Firstly, the background of NEV development in China will be introduced. Research progress of NEV powertrain systems in Tsinghua University will be summarized. Then, study on reduced order modeling and state estimation of PEM fuel cells will be presented, including the review of current fuel cell models and new reduced order modeling methodology as well as model-based state estimation. At last, research on simplified P2D model of lithium-ion battery and model-based fast charging control algorithm will be reported.