

## **A Method for Evaluating Performance of Wheel Slide Protection Algorithm Using a Hybrid Simulator**

Daisuke HIJIKATA    Yuta KIZAKI    Shin-ichi NAKAZAWA

In performance evaluation of Wheel Slide Protection (WSP) system, adjustment of control algorithm by an on-track test is the most important process. However, since it is not easy to stably reproduce low adhesion condition between wheels and rails in the on-track test, the control algorithm must be adjusted under different adhesion conditions for each run. Therefore, to solve this issue, we have developed a hybrid simulator that combines a real-time computer and pneumatic brake device. The developed simulator can specify arbitrary adhesion conditions, vehicle models, and control algorithms. This paper describes a method for evaluating the performance of the control algorithm for WSP using the hybrid simulator.