以RecurDyn/Simulink建模與模擬含磁流變減震器之半車懸吊系統

This work implements the multibody system simulation software "RecurDyn" and a block-oriented software "Simulink" to construct a closed-loop system of half-car suspension system with magnetorheological(MR) damper. From response perspective, with the aid of RecurDyn, there is no need to derive the equations of motion for the half-car suspension system under consideration, in addition the MR damper is built as a subsystem thereby posses portability. The Simulink a versatile interface able of handling any type of controller to be tested. Through a numerical example, the effectiveness of cosimulation of RecurDyn and Simulink in reducing the period of time of developing an satisfactory controller for the suspension system is demonstrated.