Perceptible Changes in Driving Dynamics due to Regenerative Braking: Analysis and Reduction through Active Chassis Systems

Abstract:
The changes of vehicle behavior when using regenerative braking instead of normal braking are investigated and compared to thresholds representing perceivable changes in yaw, pitch, and roll. Active chassis systems are then used to reduce these changes allowing higher regenerative braking at the rear axle and therefore higher energy efficiency for the research vehicle Visio.M without undesired feedback to the driver.