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Design of a Drift Assist Control System Applied to Remote Control Car

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Abstract : In this paper, a drift assist control system is proposed for remote control (RC) cars to get the perfect drift angle. A steering servo control scheme is given powerfully to assist the drift driving. A gyroscope sensor is included to detect the machine's tail sliding and to achieve a better automatic counter-steering to prevent RC car from spinning. To analysis tire traction and vehicle dynamics is used to obtain the dynamic track of RC cars. It comes with a control gain to adjust counter-steering amount according to the sensor condition. An illustrated example of 1:10 RC drift car is given and the real-time control algorithm is realized by Arduino Uno.

Keywords : drift assist control system, remote control cars, gyroscope, vehicle dynamics
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