



Online parameter estimation for a 3-wheel electric car

Make OMotion's traction control system ready for the road

OMotion is located outside of Lund. We have developed a 3-wheel electric car. It has two wheels in the front and one in the back. The motor is a hub motor in the rear wheel. The top speed is 110 km/h and the range 150 km.

We have completed two Master's thesis project together with the department of Automatic Control in Lund. One related to slip control (longitudinal slip) and one related to Traction Control (lateral slip).

The idea for this new Master's thesis is to integrate the longitudinal and lateral slip controllers so that they work together. Furthermore, in order to get the system working in a real environment the controller and model parameters need to be updated online while driving. This requires for online system identification and parameter estimation to be developed and implemented.

OMotion has developed its own ECU, which means that all algorithms can be implemented in the vehicle and tested live.



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