Title: Interfaces for sub-level-4 autonomous driving

Level: Bachelor/Master

Keywords: Autonomous driving, autonomy levels 3 and 4, human-vehicle interface and interaction

Supervisor: Naveed Muhammad, Co-supervisor: Yar Muhammad

Description: Autonomous vehicles have the potential of making transportation safer and more efficient. SAE defines levels of autonomy from 0 to 5, level-0 being no driving automation at all and level-5 being full autonomy without any weather or geographical restrictions (cf. Figure 1). Autonomous vehicles are not expected to suddenly achieve level-5.

In this thesis project, you will investigate the area between levels 3 and 4. More specifically you will investigate what inputs will a vehicle require from riders once it is surely above level-3 but hasn’t yet achieved level-4 of autonomy. This includes different interfaces such as tactile, speech etc. and kinds of information that needs to be passed between rider and vehicle.

Some relevant literature: