MBSD Assignment #1 A.Y. 2024/25

# Purposes

* Perform the concept phase, according to the ISO26262, of a “one pedal controller” for a car.

A Microsoft Word draft of the document to be provided as deliverable of this laboratory,

1-2 Item definition - HARA One pedal.docx

Three examples are provided: airbag, front light manager (FLM), Skyhook suspension controller.

The description of the considered item is provided in the draft.

The deliverable has to be provided as a .ZIP file up to **April 6th at 23:59.**

It is sufficient that only one of the group members uploads it.

After this, during this semester are expected 3 more assignments:

2. Development of the Simulink model of both the one-pedal controller and the longitudinal physical model of the car.

3. Functional safety concept and development of the safety mechanisms to be integrated in the Simulink model of the controller. The safety mechanism shall be tested by unit and integrations tests.

4. Code generation of the controller model developed and tested during the laboratory 3 and integration in SimulIDE.