Meeting summary: 07/05/19

## Present during meeting

1. Erik Schaltz (Supervisor)
2. Lajos Török (Supervisor)
3. Nicolás Murguizur
4. Nicolai Fransen
5. Estefanía Ruiz
6. Aitor Teran
7. Mihai Rusu
8. Faheem Achmad

## Meeting discussion

1. Updates:
   1. Inverter: A simulation of the driver circuit was taken from 2018 project, after fixing minor issues, it was found that voltage spikes appear in the gate of the push-pull as well as in the gate of the MOSFET. To solve this, the push-pull gate was changed from 1Ω to 100Ω and a capacitor was added at the gate.
   2. Control: Oscillations are still apparent in the currents. In order to reduce these, control PI is being optimized and a firmware delay is being reduced.
   3. Software: First released is almost ready, minor tweaks are being done. The goal is to perform all the control related computations before one half of the period, this way it would only take half a period to go from measurements of currents to update of PWMs.
   4. Writing: Control chapter, as well as software (firmware) chapter are almost finished. New version of the document will be sent to supervisors during this week. It will also include discussion about batteries, inverter and regenerative braking (which will be included in control chapter).
   5. Tests: There has not been time to perform further tests on the inverter during this sprint since inverter was being fixed. FOC tests designs have already been design.
   6. Batteries: All three of them are fully charged, between the 7th and 8th, they will be tested for capacitance and the model will be done.
2. Discussion:
3. Control current ripples might be corrected by decreasing the cut-off frequency of the filter. This will be done to see if it helps.
4. Tasks for the next sprint:
5. Firmware: Release 1 is done. Firmware is working including FOC.
6. Tests: FOC tests are performed. If there aren’t many errors, tests on the bench should finish during next sprint.
7. Batteries: Modelled and included in the simulation. Ready to be tested with the motor.
8. Writing: A meeting on the 14th is scheduled. By then, team should have second feedback from supervisors and also a more advanced document. Possibly including chapters such as introduction or problem statement.