2020-2021

## Master's Thesis Engineering Technology

## **Development of laser subsystem** for OSCAR-QUBE sensor:

Testing and characterization of performance in pulsed and continuous-wave operation.

## **1. INTRODUCTION**

Nitrogen-Vacancy (NV) centers in diamonds are opto-magnetic probes acting as solid-state qubits making them ideal for electron spin-state readout. A laser is needed to excite the NV



## **3. CONCLUSION**

The final system offers a stable power output with a standard deviation of 0.5%. Furthermore, during long duration testing the thermal stability of the system has also been proven. The system





QUBE



