

1. Hochschule Technik und Wirtschaft Dresden

Adaptive Cruise Control for urban environment (uACC) [based in Dresden which partners with HsKA on HaWTech, Advisor: Prof Trautmann] <http://www.htw-mechlab.de/index.php/lehre/uacc/>

2. Hochschule Karlsruhe - Technik und Wirtschaft University of Applied Sciences - Prof. Gintner has said the HsKA will help find affordable housing near the university if you select Karlsruhe. We can check if this is the case with Dresden if you are interested in the UACC program. Feel free to email Prof. Gintner and cc Beth Slack introducing yourself and mentioning your interests - he is happy to help you find a project that matches your interest.

Snow Sensor Project [Karlsruhe, Advisor: Prof Klemens Gintner, ME student Soyoung Moon see worked on this last year]- development & construction of a carrier for the sensor devices (to be used in the track later) - new concept of a humidity sensor (distinguishing snow – water – ice) – we have already first results and work on improvement- integration of different sensors systems (GPS, acceleration, snow-hardness, humidity, temperature, usb-camera)

Combustion Engine (biofuels and water injection in gas combustion engines) [Karlsruhe, Prof. Maurice Kettner who will be available only April 1 to discuss] <http://www.hs-karlsruhe.de/ikku/motorentchnik.html>

The following topics are proposed by Kurt Kruppok [contact Beth Slack for email](#) :

A) Creating a vehicle model in Simscape to calculate the energy consumption of certain routes [battery model, propulsion energy, ancillary units, pre-selection of a configuration]

B) Representation, integration and control of diagnosis messages in a Matlab / Simulink environment [Vehicle diagnosis, Work on the vehicle, CAN bus, Matlab coding]

C) Comparison of predicted and simulated energy consumption of an electric vehicle for parameter adjustment [Matlab coding, Read up on existing Matlab codes, Literature survey on driver type recognition, Adaption of Java-Code into Matlab]

D) Determining the energy saving potential of an electric vehicle based on environmental, route and driver data [Matlab coding, Read up on existing Matlab codes, Literature survey on energy saving potential and energy saving measures]