

Bachelor or Master Thesis Material and Energy Flux Analysis

■ Organizational aspects

The thesis can be written in **English, French, or German.**

■ Motivation and objectives

CO₂ neutrality must be achieved by 2050 in order to reach the targets stipulated in the climate protection agreement of Paris. Since the transportation sector is the second most emitting sector in Germany – and the first in France, its emission reductions should drastically decrease in the next 30 years. In this context, conventional fuels could be substituted with renewable ones in conventional vehicles making them a possible sustainable transport solution. Therefore, the investigation of the production costs of renewable fuels become interesting. The purpose of the work is to estimate the capital expenditures as well as the operational expenditures of the production of renewable fuels.

■ Content of the thesis

At first, you will review the literature to inventory models treating similar topics. According to these first insights, you will define the production system that you will investigate. Afterwards, you will create a model using the software Aspen Plus. You will then use your model to run simulations and estimate material and energy flows. At the end, you will also focus on the critical appraisal of your model and your simulations results.

■ Requirements

Reliability, commitment, and pro-active attitude

■ Duration

3 to 6 months

■ Please contact

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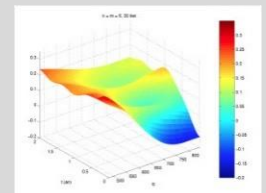
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