

Sustainability Assessment Framework for Low-Carbon Aviation Fuels

Type:Semester Thesis / Master ThesisContent:theoreticalPossible start:May 1/2023

Assistant Professorship for Sustainable Future Mobility (SFM)

Our group carries out research in the areas of *novel concepts in aviation, propulsion, and Hyperloop technology as well as safety technology*. We use the principles of technical thermodynamics as a focus in research supported by elements of fluid mechanics, heat and mass transfer, acoustics, chemical reaction kinetics and systems dynamics. The Assistant Professorship of Sustainable Future Mobility aims to motivate students to develop modern technology for today and tomorrow.

Job Description

The aviation industry's net-zero carbon emissions target (2050) is focused on delivering a maximum reduction in emissions. In this context, the SFM group is researching and developing technical and environmental analyses for sustainable aviation (SAF) fuel production.

This research aims to determine a *methodological framework for environmental analysis of SAF pathways* considering the European scenario based on the *2050 ICAO Vision for Sustainable Aviation Fuels.*



OVERVIEW | Low-Carbon Fuels Value Chain.

Your Tasks

- Literature research on processes SAF
- Environmental assessment of promises SAF pathways

Recommended Prior Knowledge

- Background in thermodynamics
- Good and well-structured programming skills (*Python, MATLAB, etc.*)
- Good communication (*English skills*)

Contact

If you are interested in this topic, please send your application to **Dr. Pablo Silva Ortiz** (<u>pablo.silva@tum.de</u>). If you have any questions, do not hesitate to contact us.