

## Research Internship

11.03.2025

# Laser Induced Fluorescence (LIF) Measurements of different nozzle geometries

Research Internship Master CS0294, 5 ECTS (150 hours) or CS0297, 10 ECTS (300 hours)

## Description

Laser Induced Fluorescence Measurements of different nozzle geometries to optimize the mixing process in a secondary combustion zone of a biomass combustion plant needs to be done. The LIF-System consists of a UV-Laser and a camera and will be used to investigate the mixing of gas streams. One gas stream is infused with acetone and its fluorescence will be activated by the UV Laser. The captured images will then be analyzed to find concentration fields.



Figure 1: Long axis agitator

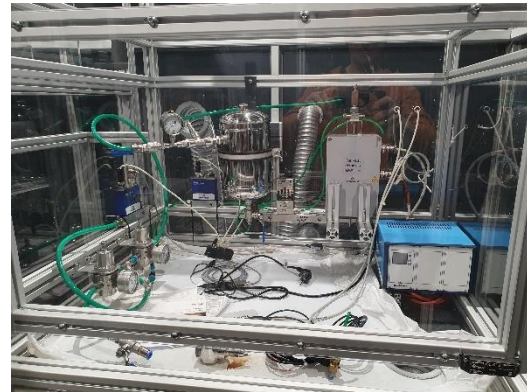


Figure 2: CFD Simulation Long axis agitator

## Tasks

- Literature research
- Solid works design
- Mounting the designed components
- Checking all the System Components
- Operating of the trial facility

## Requirements

- Solid works
- Fluid mechanics
- Mechanical engineering with a practical orientation
- Hands on mentality

There is a strong perspective for continuing with a master thesis after your internship.

If you think you are the right candidate to solve this task, please contact me.

You can **start the research internship any time.**

I am looking forward to get to know you.

## Contact

Bernhard Huber

Professur für Regenerative Energiesysteme

Schulgasse 16, 94315 Straubing, Raum 0.A10

Telefon: +49 (0) 9421 187-114

E-Mail: b.huber@tum.de