

## Masterthesis

### **Title: Continuous machine learning approach assessed on a large database of heat transfer for supercritical water**

#### **Task description:**

Machine learning models gained recently more attraction in the research community also for predicting complex heat transfer phenomena.

A large amount of heat transfer experimental data exists in different institutions, but the data is often confidential. Therefore, the creation of a corresponding comprehensive database, collecting in a classical way the data from different institutions, is very unlikely to succeed. Continuous training of a machine learning model, shared from institution to institution, could eventually mitigate such problem, by merging the information available from different institutions within a common, predefined, Continuous Machine Learning Approach (CMLA). It is the goal of this work to investigate the feasibility of different CMLAs for continuous learning. The assessment of different CMLAs will be achieved on the existing high-fidelity large database of heat transfer for supercritical water.

#### Tasks of the thesis:

- Literature review
- Existing and new proposed Continuous Machine Learning Approaches (CMLA)
- CMLA's assessment on a large database of heat transfer for supercritical water
- Conclusions and recommendations

#### **Begin of the thesis**

ASAP

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