



## WORK OFFER

Ref. No. DE-2022-1060-1

### Employer Information

**Employer:** Technical University Munich  
Associate Professorship of Thermo-Fluid Dynamics  
Boltzmannstr. 15  
  
D-85747 Garching  
Germany

**Website:** <https://www.tfd.mw.tum.de>

**Location of placement:** Garching  
**Nearest airport:** München (MUC)  
**Working hours per week:** 40.0  
**Working hours per day:** 8.0

**Number of employees:** 50

**Business or products:** Research

### Student Required

**General Discipline:** MECHANICAL ENGINEERING

**Completed years of study:** 3

**Field of Study:** Aerospace, Aeronautical and Astronautical/Space Engineering.

**Student status requirements:** Required during the whole period of internship.

**Language required:** English Good (B1, B2) Or  
German Good (B1, B2)

#### Required Knowledge and Experiences:

Required theoretical knowledge: Advanced Mathematics (Differential equations, vector algebra, complex numbers, ...), Thermodynamics, Fluidmechanics, Numerical Methods  
Required programming skills: good knowledge of Matlab (or equivalent, e.g. Python etc.)  
Experience with CFD simulation is beneficial (OpenFOAM, Ansys Fluent, ...)

#### Other requirements:

This 3-months offer is specifically designed for Non-EU nationals to allow them an easier access to our institution, e.g. no needs of Visa. EU/EFTA citizens are referred to our second offer.

### Work Offered

The trainee will work in a group of ~40 PhD students. The trainee will directly collaborate with one or two PhD students. Our group works on theoretical, numerical and experimental investigation of thermoacoustic instabilities, combustion, two-phase flow and heat and mass transfer. For details please consider our homepage(s) <https://www.tfd.mw.tum.de> and <https://www.td.mw.tum.de>. Depending on the individual interest and previous knowledge, projects offered for students are mainly in the field of numerical simulation of thermo-fluids (by means of CFD, i.e. OpenFOAM, etc.) and reduced order modeling of thermo-acoustic instabilities (based on Matlab/Simulink). Besides, projects related to experimental investigation of reacting flows by means of optical (LIF, PIV, etc) and acoustical measurement methods may also be possible. As thermo-fluid dynamics is a challenging discipline, trainees will have to spend the first weeks of the internship to get into the topic. Therefore, the minimal duration of the offered internship is 5 months. For more details on the IAESTE program at our institute, please consider <https://www.tfd.mw.tum.de/index.php?id=228&L=1>

**Number of weeks offered:** 12 - 12

**Within the months:** 01-JAN-2022 - 31-DEC-2022

**Or within:** -

**Company closed within:** -

**Working environment:** Research and development

**Gross pay:** 861 EUR / Month

**Deduction to be expected:** variable

**Payment method / time of first payment:** Other Cash or bank transfer / end of month

**Latest possible start date:**

### Accommodation

**Canteen at work:** Yes

**Expected type of accommodation:** Info will be handed in later

**Accommodation will be arranged by:** IAESTE

**Estimated cost of lodging:** 400 EUR / Month

**Estimated cost of living incl. lodging:** 861 EUR / Month

### Additional Information

see additional documents

### Nomination Information

**Deadline for nomination:** 2021-03-11

**Date:** 08-SEP-2021

**On behalf of receiving country:** IAESTE Germany