# Numerical Investigation of the Combustor-Turbine-Interface

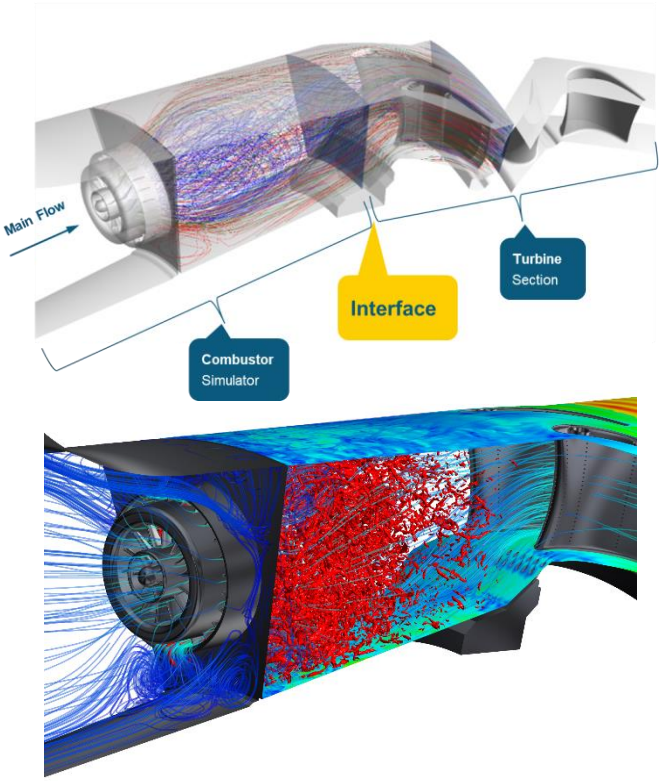
TECHNISCHE UNIVERSITÄT DARMSTADT

Numerische Untersuchung der Brennkammer-Turbine-Interaktion

*Masterthesis*

**Background**

Understanding the interaction between the combustion chamber and turbine components in aircraft engines is playing an increasingly important role in complying with ever stricter emissions regulations. In particular, uncertainties and instationarities, which arise among other things from the combustion process, influence the efficiency and service life of the turbine. The rising availability of computational resources enables the usage of scale resolving simulations in context of combustor-turbine-interaction and helps to improve the understanding of the fundamental effects at this crucial position in the engine.




**Tasks**

- Literature research and training
- Mesh generation combustor simulator, high pressure turbine (LSTR)
- Scale resolving simulation
- Application of PODFS method for coupling of combustor and turbine
- Postprocessing of simulation data
- Documentation of the results

Ausgeschrieben am

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**Betreuer/in**

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**Schwerpunkt**

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| | analytisch |
| | konstruktiv |
| | experimentell |
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