

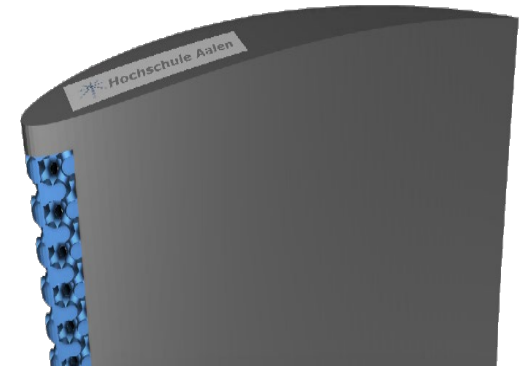
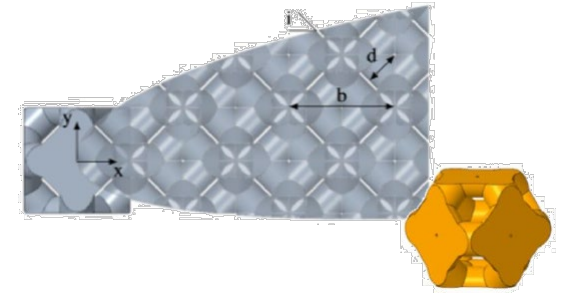
Aerodynamic and aeroacoustic properties of sound absorbing structures

Objective and task:

The aim of this research project is to identify the physical mechanisms of porous structures in terms of noise reduction. Since the application to aerospace is of great interest in this research, the aerodynamic and aeroacoustic properties of airfoils and fans blades with integrated porous structures should be analysed.

Additive manufacturing opens up new possibilities to create geometric porosity, which is adapted to the application. Complex freeform geometries and porous structures can be realised with high dimensional accuracy.

The task of the work includes the analysis and evaluation of sound absorbing structures by means of numerical simulation for aerodynamic and aeroacoustic properties and validation with Kundt's tube.



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