Master thesis project

Automatic CAD generation of novel concepts for aerospace concepts (30 credits)

Background

To be able to meet the sustainability targets set by customers and society at large, manufacturers need to explore and develop conceptually new designs. Often, the design of novel aircraft components relies on the use of CAD models and the subsequent geometry-based analyses for evaluation of the quality of a concept. However, the generation (and variation) of a CAD models to include radical or novel design solutions is a resource intense modelling effort.

Thesis questions and expected outcome

This thesis requires to model radically novel concepts for aerospace components in CAD in order to evaluate them. The thesis will start from an existing method and algorithm for automatic CAD modelling generation but requires to 1) refine the available models and 2) design and write a script that allows to run the CAD generation of concepts in “batch”.

Student profile and application

Strong interest in combining CAD modelling with computer. Desired programming experience in C++, Java, Matlab or Phyton. Desired CAD modelling experience with CATIA, Siemens NX or Solid Works. Application open to any master program. Start in January or per agreement.

Contact information

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