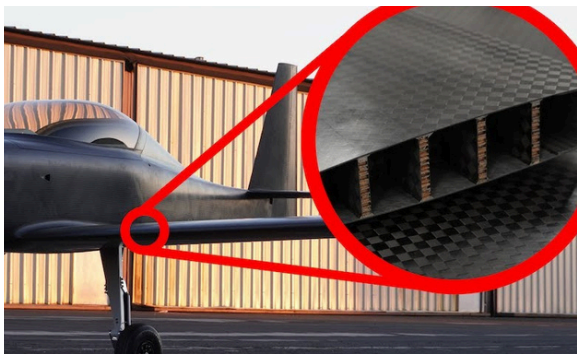


SUGGESTED TOPIC FOR SCIENTIFIC WORK

Internal Wing Design

The objective is to optimise our wing's internal structure using FEM to reduce vehicle weight while improving mechanical performance. Designs will be evaluated based on manufacturability, cost and aerodynamic performance. Simulations will preferably be performed in HyperMesh, with CFRP's anisotropic properties presenting a particular challenge.
The project will explore alternative internal designs and manufacturing methods, including CFRP ribs, lost cores, inner bagging, improved spar and rib concepts, alternative fibres and forged carbon components.
The most promising designs will be manufactured and iteratively tested to evaluate their performance and manufacturability. The topic is merely a suggestion and must be finalised with the institute.





https://i.ytimg.com/vi/BIZArkn8nho/maxresdefault.jpg

Tasks:

- CAD Design & FEM Simulations
- Evaluate designs
- Manufacture most promising designs

Requirements:

- Creativity
- FEM experience
- CAD basics
- CFRP experience
- Become team member