

Mechanical Engineering Thesis Defense

Conceptual Composite Wing Design

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Abstract

Automation has become a staple in high volume manufacturing, where the consistency and quality of a product carries as much importance as the quantity produced. The Aerospace Industry has a vested interest in expanding the application of automation beyond simply manufacturing. In this project the process of systems engineering has been applied to the Conceptual Design Phase of product development. Where automated structural analysis can be used to develop a composite wing structure that is then validated directly in Computer Aided Drafting (CAD). This concept provides the user with the ability to quickly iterate designs and develop a structural model early in the design process that can be used to educate decisions regarding aircraft weight, range, and flight maneuverability.



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Zoom Link: <https://asu.zoom.us/j/4561313285>