

Mechanical Engineering Master's Defense

Computational Tool Development for
Design Completion and Evaluation/Analysis

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abstract

Conceptual Design is known as the iterative process of proposing a solution (or proposing a set of sub-solutions and combining them), evaluating it, and modifying it so that it meets the design requirements. Unlike most engineering tasks though, evaluation/analysis of concepts is not straight forward. It requires working with qualitative data (vs. quantitative data), ill-defined problem and ill-structured and abstract sub-solutions.

The purpose of this work is to provide a computer tool to assist with idea morphing and analysis. Providing an effective solution representation, completion and analysis approach, this tool is to aid intermittent cycles of evaluation and re-design.



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