

WING SHAPE OPTIMIZATION USING FED AND TWIST PARAMETERIZATION

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Abstract

Optimization of wing shapes for aerodynamic performance is presented using a combination of particle swarm method and surrogate models. The wing shape deformations are parameterized using free form deformation together with wing twist. The developed strategy is applied to the lift-constrained drag minimization of Onera M6 wing.

Keywords: *Particle Swarm Optimization, Free Form Deformation, Wing twist parameterization, Surrogate Models, Shape optimization*

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