

Overview on the DESIREH project

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Abstract

DESIREH stands for “ Design, Simulation and Flight Reynolds Number testing for advanced High Lift Solutions”. The project is aimed to improve the aerodynamic design and simulation methodology of high-lift systems.

The investigations made include the acceleration of CFD simulations, the improvement of enhanced optical measurement methods in cryogenic environment, and the assessment of the suitability of automatic design optimization for high-lift systems.

Beside the methodological aspect, the findings are verified by exemplarily addressing a major topic in high-lift design today: to find a solution of a high-lift system for a natural laminar flow (NLF) wing for transport aircraft category. The established methods are used both in CFD-based design and the verification by a high Reynolds-number test incorporating the improved measurement methods.

This contribution will give an overview on the frame of the project to introduce the specialized topics in the mini-symposium.