









with initial aerofoil NACA 2412.

During a wider cruise mission flight in the range of 3°–9° angles of attack, the reduction of aerodynamic drag by 18.10% compared to the selected NACA 2412 aerofoil was achieved.

This aerofoil optimisation is directly followed by the control of its geometry according to my invention [12]. It is possible to change the shape of the aerofoil (morphing) in flight so that the behaviour of the aircraft is safe and at the same time economical.

By comparing the results obtained from the aerofoil optimisations (only with part of upper surface morphing) of the ATR-42-4 aircraft, the validity of the results is quite evident.

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