



**STUDY ON THE AERODYNAMICS ANALYSIS FOR  
BLENDED WING BODY (BWB) UNMANNED AERIAL  
VEHICLE (UAV) USING COMPUTATIONAL FLUID  
DYNAMICS (CFD) FOR SUBSONIC FLOW**

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## **ABSTRACT**

Steady-state, three-dimensional CFD calculations were made for BWB model using the standard one-equation turbulence model, Spalart-Allmaras model of commercial code, FLUENT. Comparisons of aerodynamics characteristics which are lift coefficient, drag coefficient and pitching moment coefficient, pressure contours and Mach number contours were made between the two-dimensional aerofoil results of each section in the BWB model and the three-dimensional results. The effects of angles of attack and aerofoil profiles were investigated. As the angles of attack are increased, the stagnation points of both aerofoils are moved further backward to the lower surface and the pressure different between upper and lower surfaces is increased. The highest pressure is at the leading edge.

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