

Figure 4.1: Wake profile of axial component of velocity $u(r, t)$ behind a ship hull. The contours correspond to constant values of the wake fraction coefficient w for SS ship ($C_B = 0.65$, $V = 19.4$ knots).

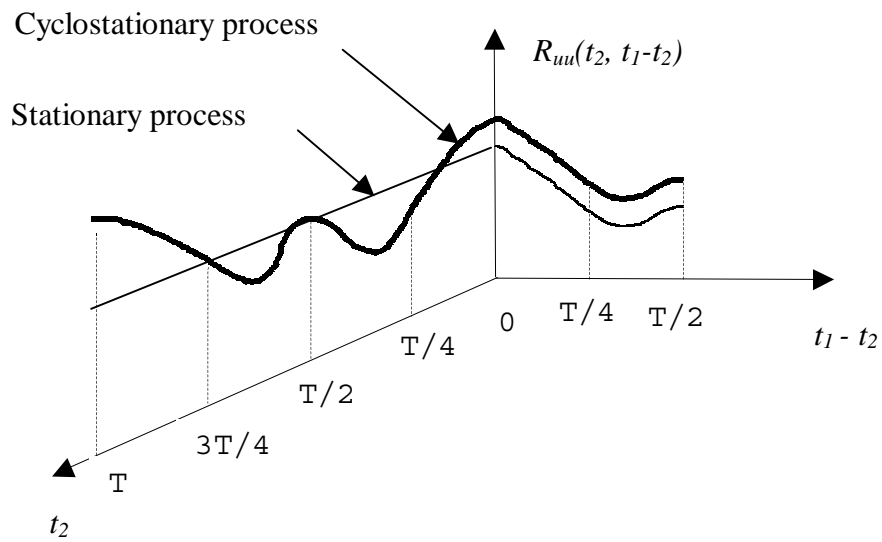


Figure 4.2: Autocorrelation, $R_{uu}(t_2, t_1-t_2)$, of the horizontal velocity component $u(r, t)$. The autocorrelation of the CS process varies periodically with t_2 , whereas the autocorrelation of a stationary process is constant in t_2 .

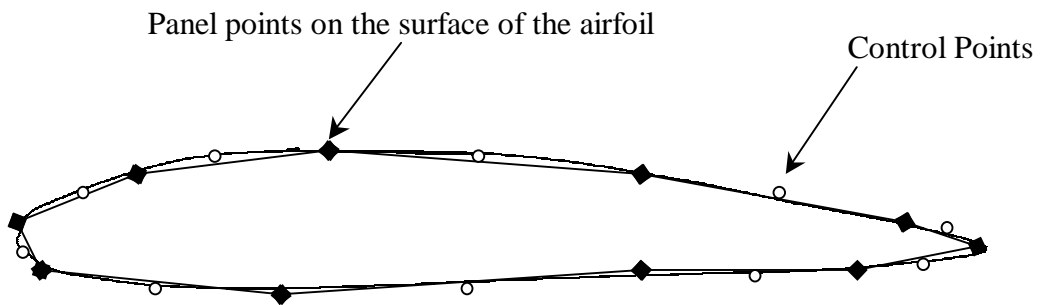


Figure 4.3: Points on the surface of the airfoil representing the geometry in the panel method.

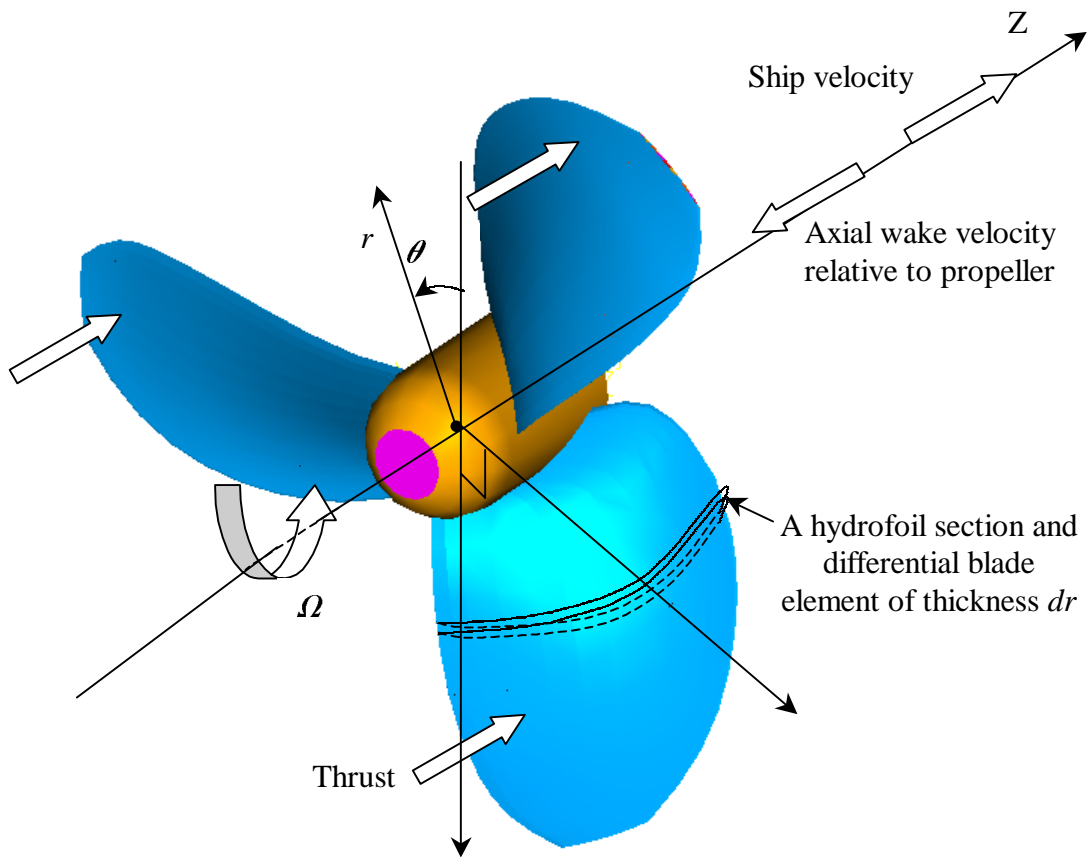


Figure 4.4: Solid model of propeller developed using I-DEASTM with the direction of rotation and the wake velocity.

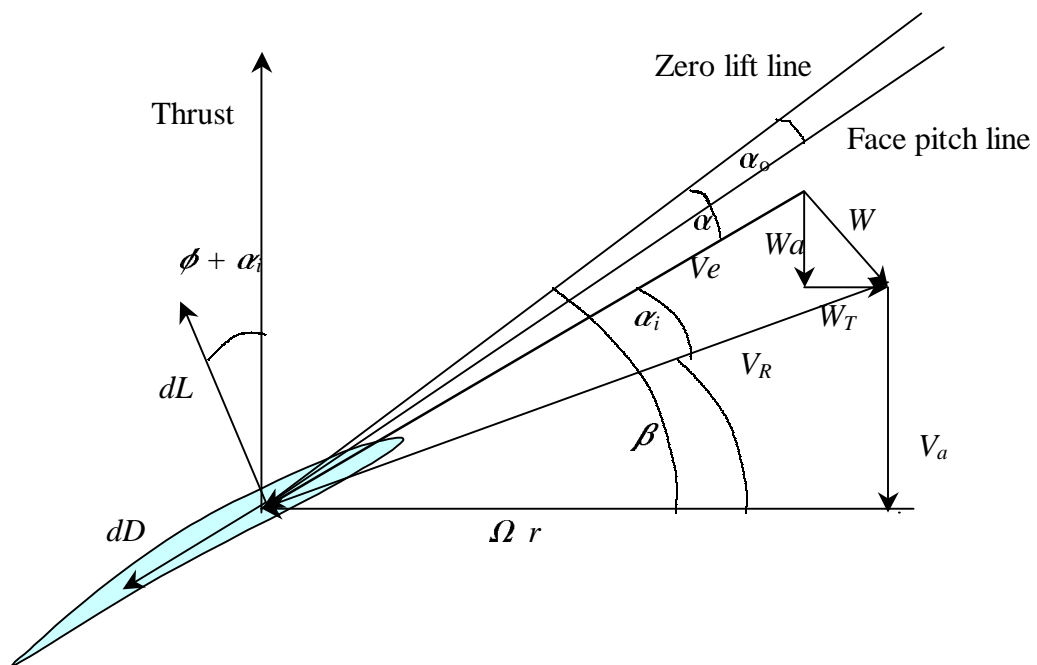


Figure 4.5: Velocities and forces acting on a hydrofoil section at r .

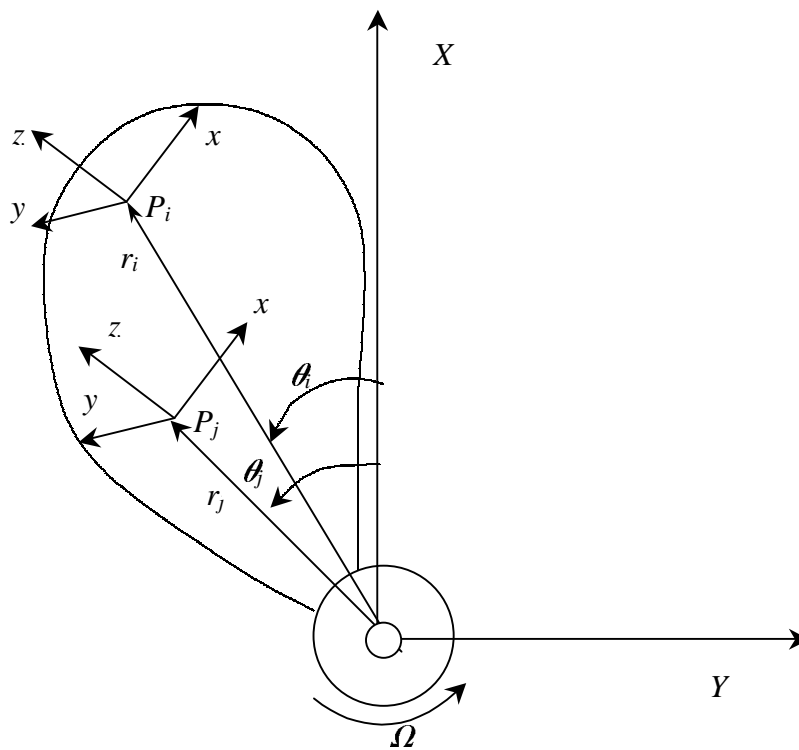


Figure 4.6: Two arbitrary points at the surface of the blade where correlations of the velocities and forces are calculated.