

Pressure Coefficient at  $\frac{2y}{b} = 0.653, \alpha = 0^\circ$

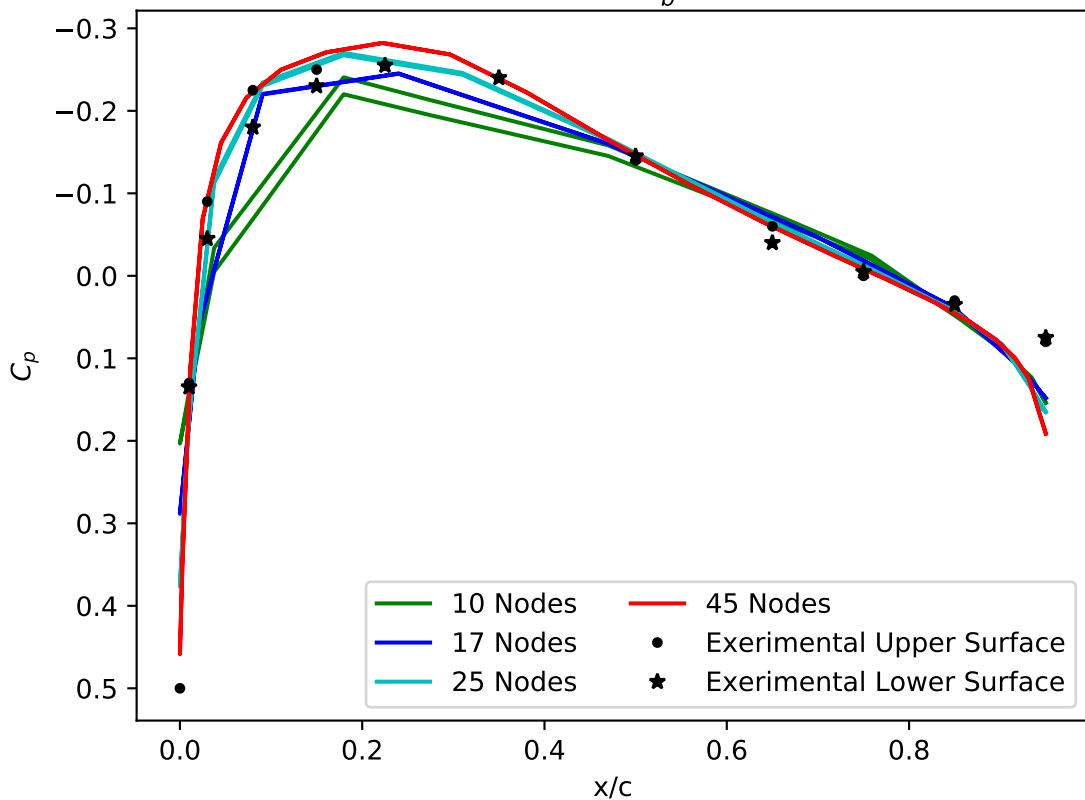
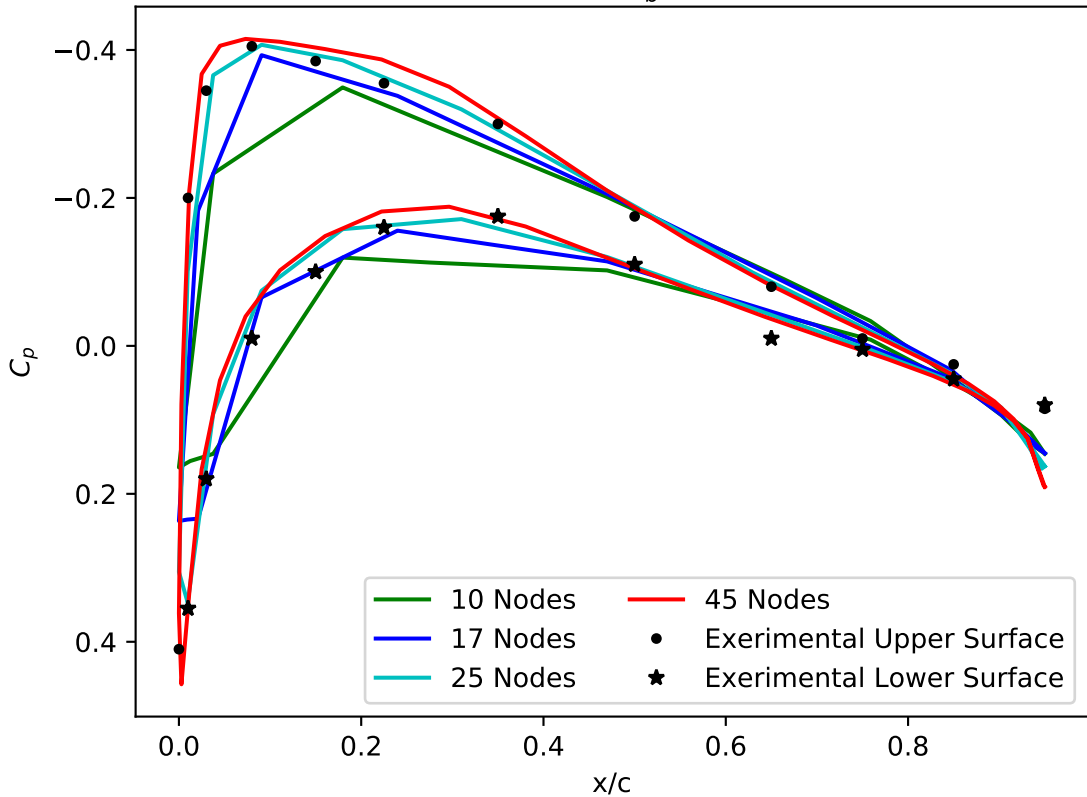
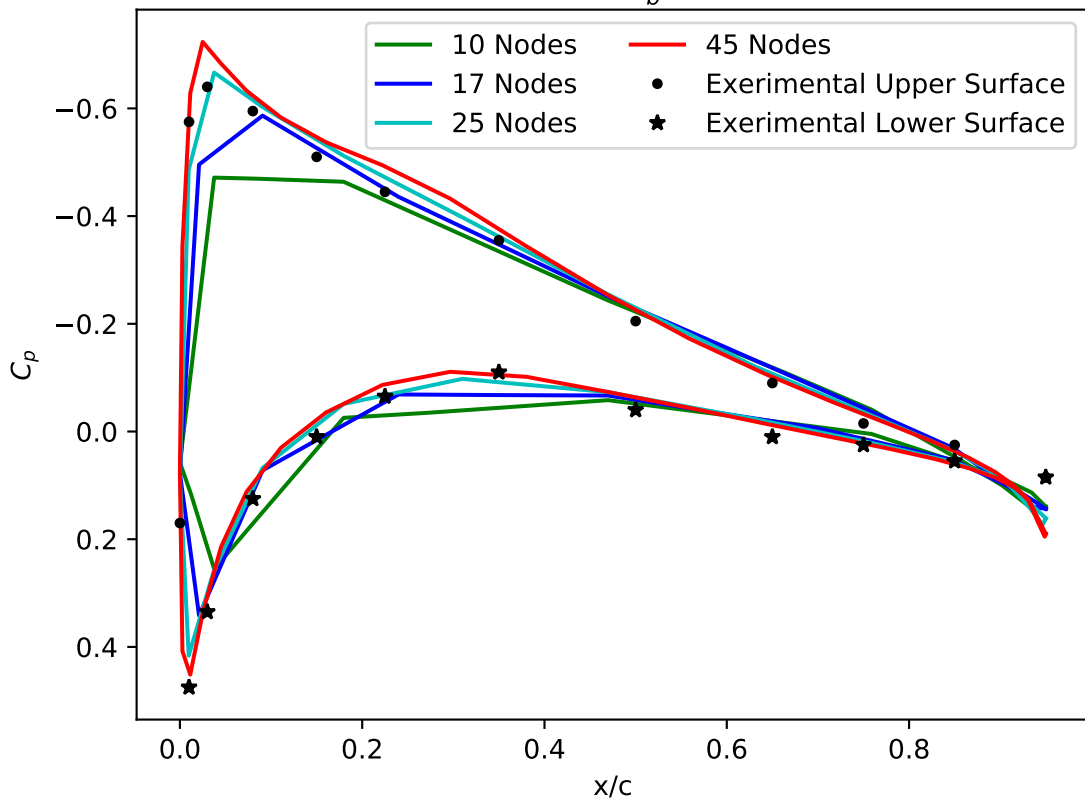


Figure 10 is a line graph showing the variation of the normalized velocity profile  $u^+$  versus  $y^+$  for different numbers of nodes (10, 17, 25, 45) and experimental data for the upper and lower surfaces. The graph shows that as the number of nodes increases, the numerical results converge towards the experimental data. The upper surface data (black dots) shows a peak velocity around  $y^+ = 10$ , while the lower surface data (black stars) shows a peak velocity around  $y^+ = 5$ . The velocity decreases as  $y^+$  increases beyond the peak.

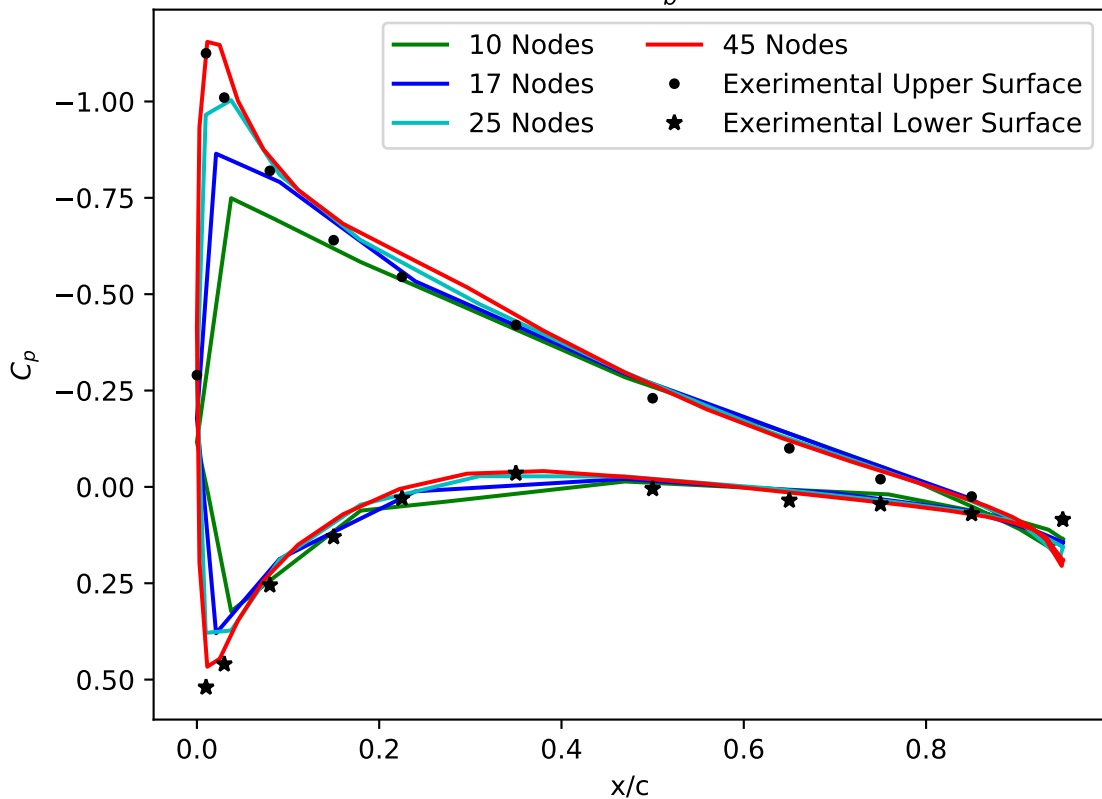
$y^+$	10 Nodes ( $u^+$ )	17 Nodes ( $u^+$ )	25 Nodes ( $u^+$ )	45 Nodes ( $u^+$ )	Exerimental Upper Surface ( $u^+$ )	Exerimental Lower Surface ( $u^+$ )
0	0.00	0.00	0.00	0.00	0.00	0.00
2	0.10	0.15	0.20	0.25	0.25	0.05
4	0.30	0.40	0.45	0.50	0.50	0.15
6	0.45	0.55	0.60	0.65	0.65	0.25
8	0.55	0.65	0.70	0.75	0.75	0.35
10	0.60	0.70	0.75	0.80	0.80	0.45
12	0.65	0.75	0.80	0.85	0.85	0.55
14	0.60	0.70	0.75	0.80	0.80	0.65
16	0.55	0.65	0.70	0.75	0.75	0.75
18	0.50	0.60	0.65	0.70	0.70	0.85
20	0.45	0.55	0.60	0.65	0.65	0.95
22	0.40	0.50	0.55	0.60	0.60	1.05
24	0.35	0.45	0.50	0.55	0.55	1.15
26	0.30	0.40	0.45	0.50	0.50	1.25
28	0.25	0.35	0.40	0.45	0.45	1.35
30	0.20	0.30	0.35	0.40	0.40	1.45
32	0.15	0.25	0.30	0.35	0.35	1.55
34	0.10	0.20	0.25	0.30	0.30	1.65
36	0.05	0.15	0.20	0.25	0.25	1.75
38	0.00	0.10	0.15	0.20	0.20	1.85
40	0.00	0.05	0.10	0.15	0.15	1.95
42	0.00	0.00	0.05	0.10	0.10	2.05
44	0.00	0.00	0.00	0.05	0.05	2.15
46	0.00	0.00	0.00	0.00	0.00	2.25



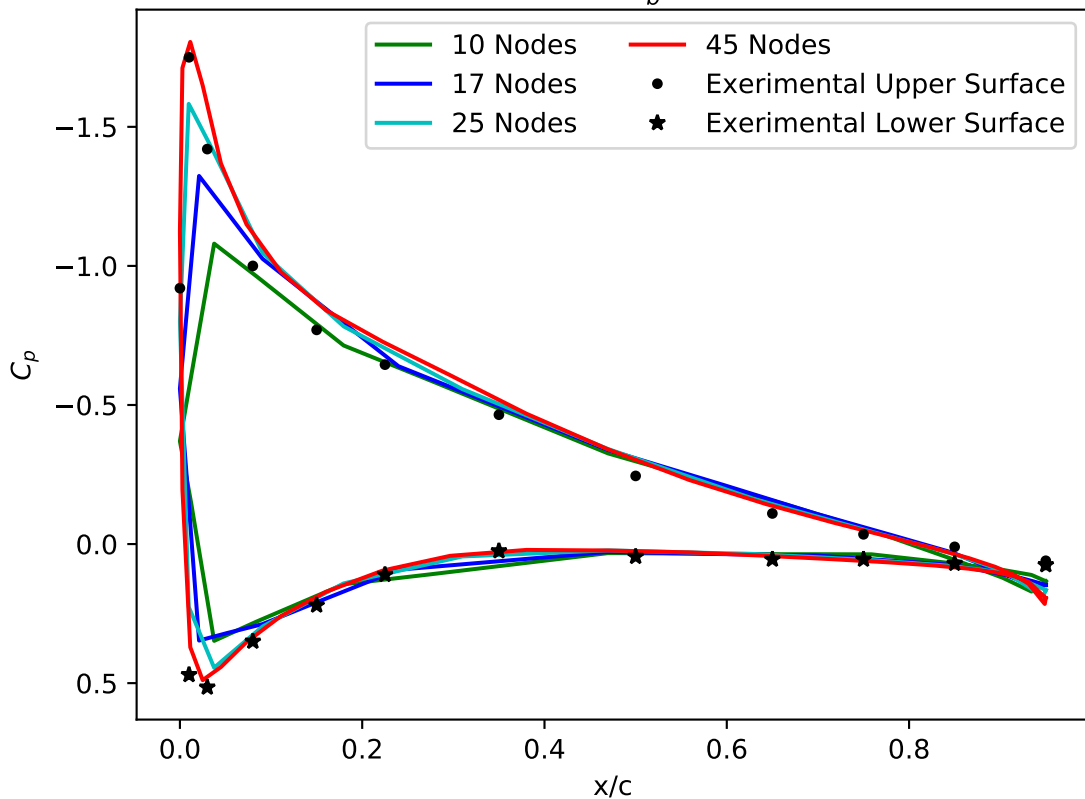
Pressure Coefficient at  $\frac{2y}{b} = 0.653$ ,  $\alpha = 4.2^\circ$



Pressure Coefficient at  $\frac{2y}{b} = 0.653$ ,  $\alpha = 6.3^\circ$



Pressure Coefficient at  $\frac{2y}{b} = 0.653$ ,  $\alpha = 8.5^\circ$



Pressure Coefficient at  $\frac{2y}{b} = 0.653$ ,  $\alpha = 10.6^\circ$

