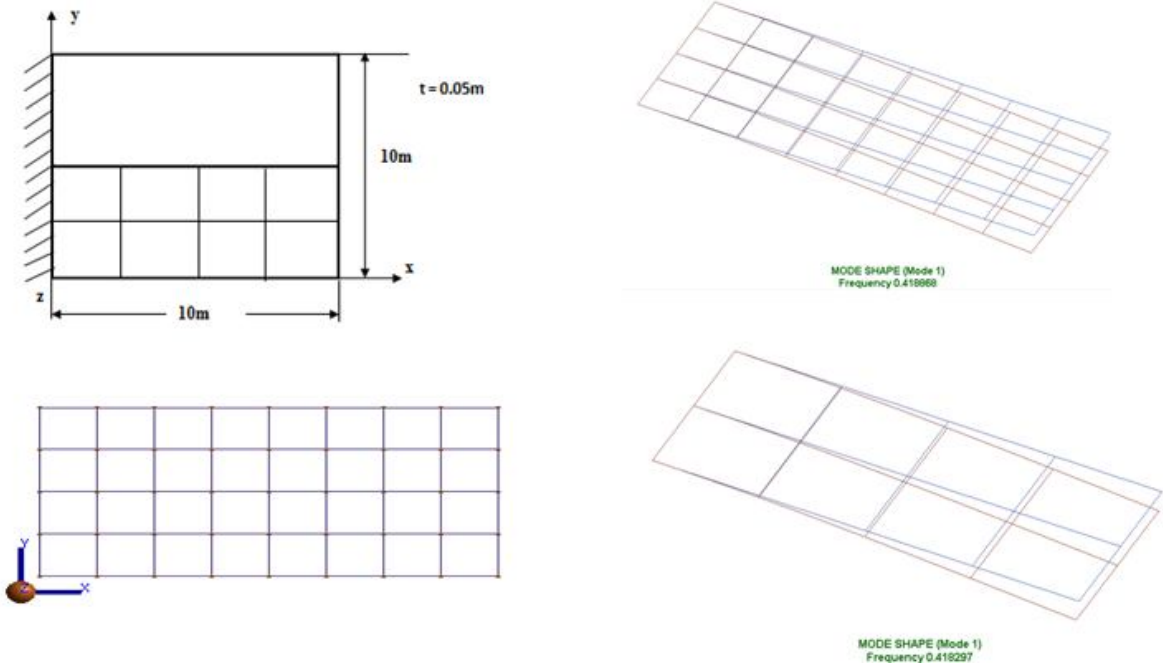


Free vibration analysis of thin square cantilever plate: symmetric modes



Boundary condition :	$U_x = U_y = R_z = 0$ at all nodes $U_z = R_y = R_x = 0$ along y -axis and $R_x = 0$ along $y = 5\text{ m}$		
Material property :	$E = 200\text{ GPa}$, $\nu = 0.3$, Specific gravity = 8		
Element type :	Thin shell element, thickness = 0.05 m		
Mesh type	Case 1 :	4 Node: 8x4	
	Case 2 :	8 Node: 4x2	
Finite element Statistics		Number of elements	Number of nodes
	Case 1 :	32	45
	Case 2 :	8	37
			Degree of freedom
	Case 1 :		112
	Case 2 :		88

Mode	4 Node			8 Node		
	NAFEMS	FEAST ^{SMT}	NASTRAN [®]	NAFEMS	FEAST ^{SMT}	NASTRAN [®]
1	0.42	0.42	0.42	0.42	0.42	0.42
2	2.65	2.65	2.49	2.55	2.57	2.48
3	3.35	3.35	3.12	3.26	3.28	3.13
4	6.73	6.73	6.04	6.48	6.61	6.16
5	8.25	8.25	7.09	7.28	7.55	7.09
6	12.68	12.61	10.57	11.59	12.29	10.99