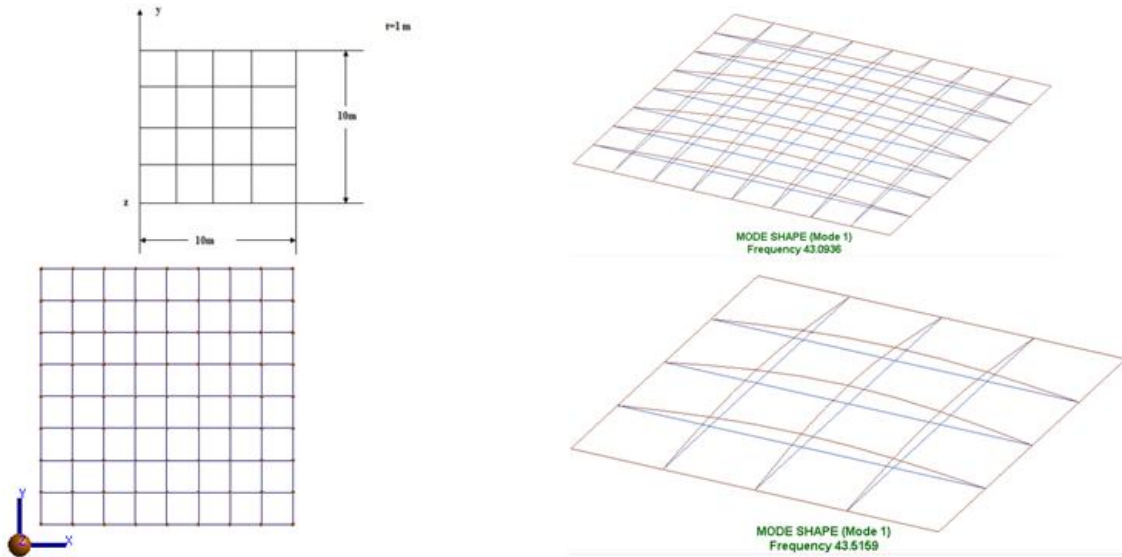


Free vibration analysis of simply supported thick square plate - case 2



Boundary condition : $U_x = U_y = R_z = 0$ at all nodes , $U_z = 0$ along all 4 edges

Material property : $E = 200 \text{ GPa}$, $\nu = 0.3$, Specific gravity = 8

Element type: Thick shell element, thickness = 1 m

Mesh type :
 4 Node: 8 x 8
 8 Node: 4 x 4

Finite element statistics :

Number of elements	Number of nodes	Degrees of freedom
16	65	163

Mode	4 Node			8 Node		
	NAFEMS	FEAST ^{SMT}	NASTRAN [®]	NAFEMS	FEAST ^{SMT}	NASTRAN [®]
1	44.75	43.09	43.93	44.13	43.52	44.34
2	112.94	104.27	105.78	107.85	104.63	107.74
3	112.94	104.27	105.78	107.85	104.63	107.74
4	170.28	153.79	154.73	164.19	157.39	160.63
5	230.23	200.89	199.13	210.07	200.02	202.42
6	230.23	201.23	199.27	210.07	200.47	202.76
7	274.19	238.69	232.48	260.32	245.96	238.36
8	274.19	238.69	232.48	260.32	245.96	238.36
9	355.98	307.21	287.84	342.80	323.73	289.28
10	355.98	329.53	309.18	342.80	323.73	318.63