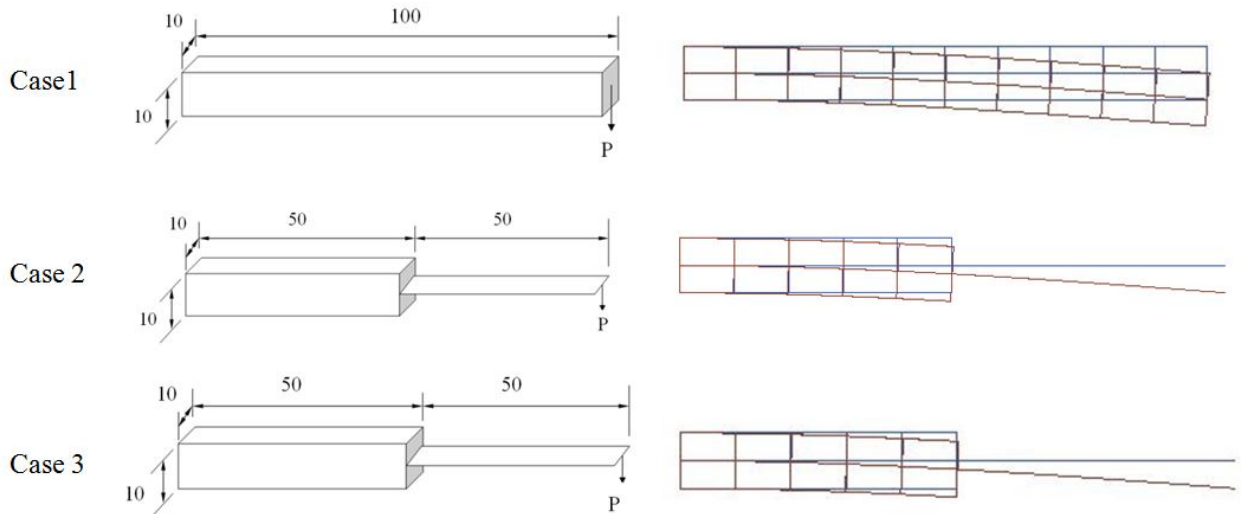


Cantilever coupling



Loading : 1000 N at the free end

Boundary condition : Fixed at left end

Material property : $E = 70 \text{ GPa}$, $\nu = 0.3$

Element types

- Case 1 : 3D beam
- Case 2 : Coupled 3D beam and plate, where plate is coupled to brick element using rigid links
- Case 3 : Coupled 3D beam and bar, where bar is coupled to brick element using rigid links

Finite element statistics		Number of elements	Number of nodes	Degrees of freedom
	Case 1 :	40	99	270
	Case 2 :	39	72	270
	Case 3 :	33	60	195

	Output parameter	Location	Theoretical value	FEAST^{SMT}
Case 1	Maximum Deflection		5.76	5.64
	Slope		0.08	0.08
Case 2	Maximum Deflection	At the free end	5.76	5.64
	Slope		0.08	0.08
Case 3	Maximum Deflection		5.76	5.61
	Slope		0.08	0.08