

Método de los Elementos Finitos (Curso 22-23)

Test 6: Beam models and static analysis

The two-span frame is made with reinforced concrete, with elastic module $E = 32 \text{ GPa}$, Poisson coefficient $\nu = 0,20$, and mass density $\rho = 2548,42 \text{ kg/m}^3$. The beam cross-section is $0,30\text{m} \times 0,60 \text{ m}$ (width and height), and the column cross-section is square with $0,40 \text{ m}$ side. The loads in the structure are their own weight, the two vertical loads (at J and K), one horizontal load (at C) and one uniform vertical load (on the beams). The supports A, D and G are fully fixed.

Run the static analysis considering a 3D model, B31 element type, element size of $0,5 \text{ m}$ (*GlobalSeed/Approximateglobalsize*) and answer the question of the quiz.

