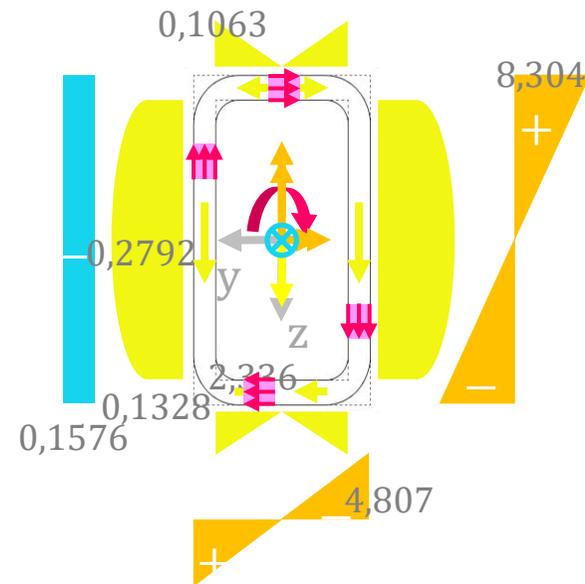
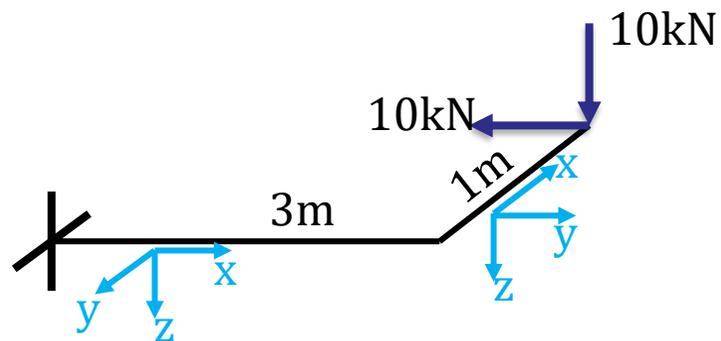


Estática y Resistencia de Materiales



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Encuestas:

EyRM - López Rivarola - Altieri: <https://forms.gle/zdHdE4NBrCUjAEhK9>

EyRM - López Rivarola - Ruiz Re: <https://forms.gle/AGHYhrU7REsQAm2H7>

Temas de la materia

- Geometría de las superficies

- Fuerzas Concentradas
- Fuerzas Distribuidas
- Sistemas Vinculados
- Sistemas Reticulados
- Sistemas de Alma llena

} Estática

- Solicitación Axil
- Solicitación por Flexión
- Solicitación por Torsión
- Solicitación por Corte

} Resistencia de Materiales

- Segundo Orden (Pandeo)

Cargas y Empujes



Apoyos de puentes



Uniones (Pórticos)



Uniones (Pórticos)



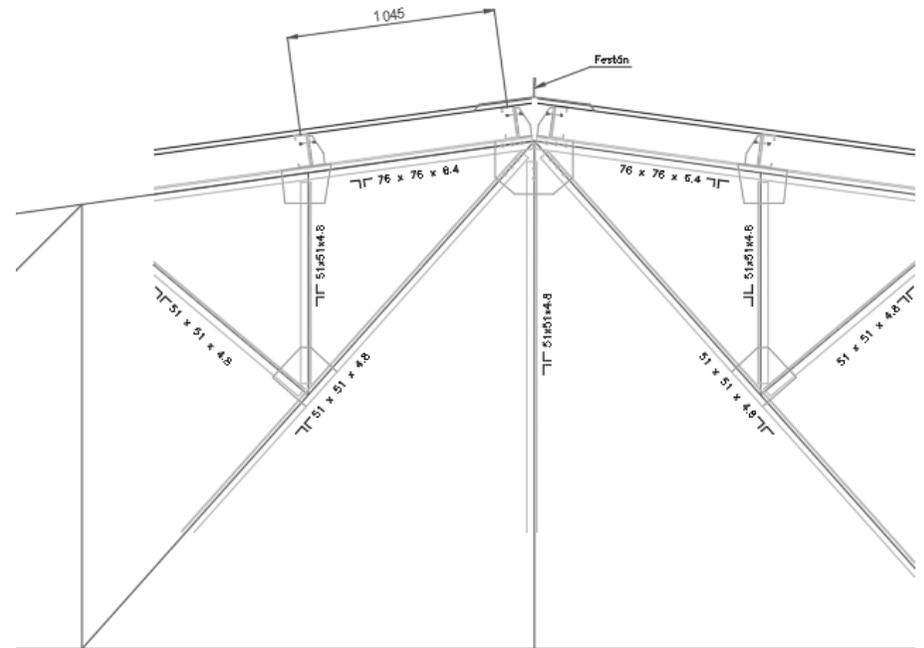
Parrales (Pórticos)



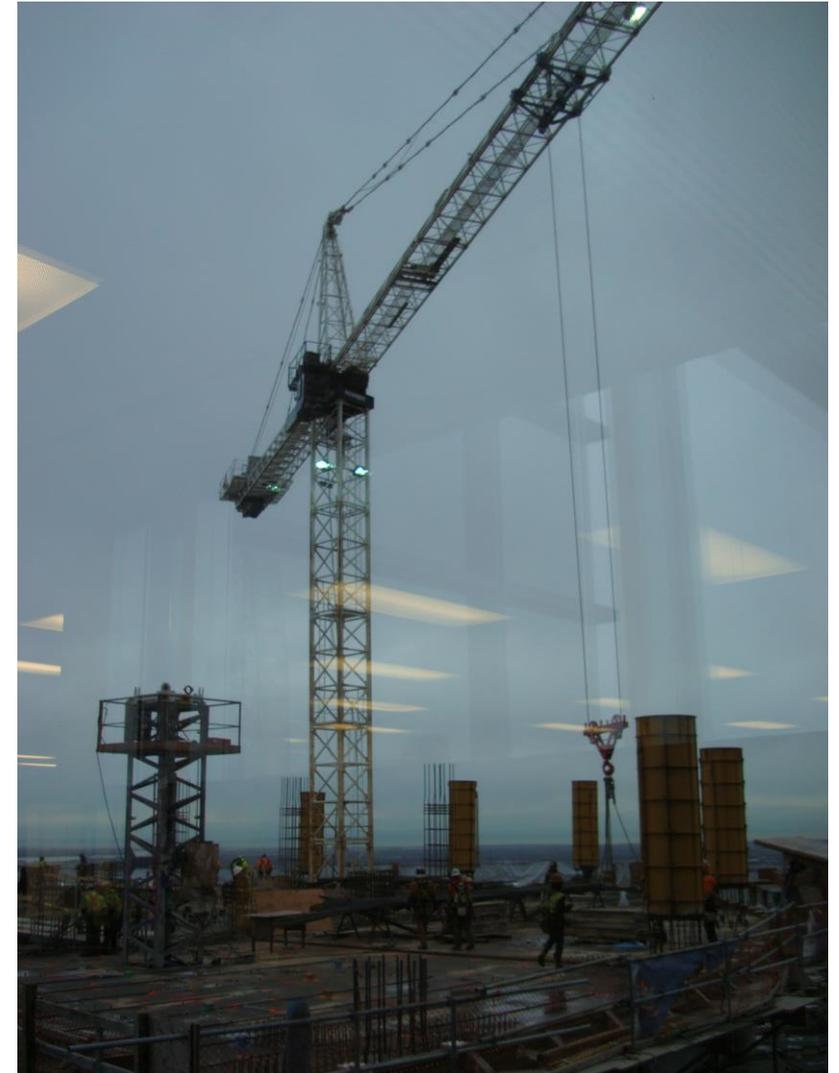
Hormigón prefabricado vs insitu



Uniones (Reticulados)



Reticulados



Reticulados espaciales



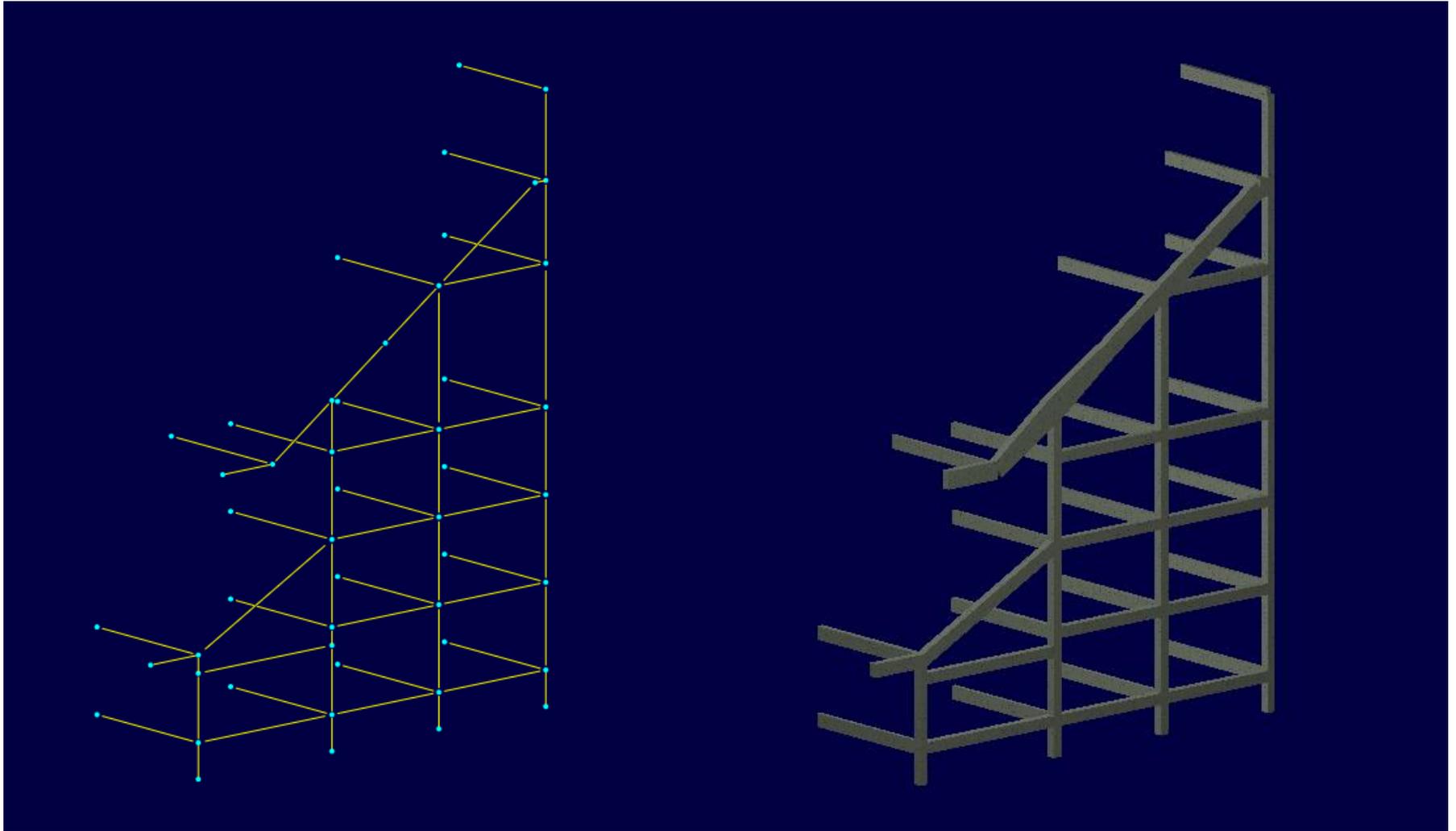
Represa El Chocón



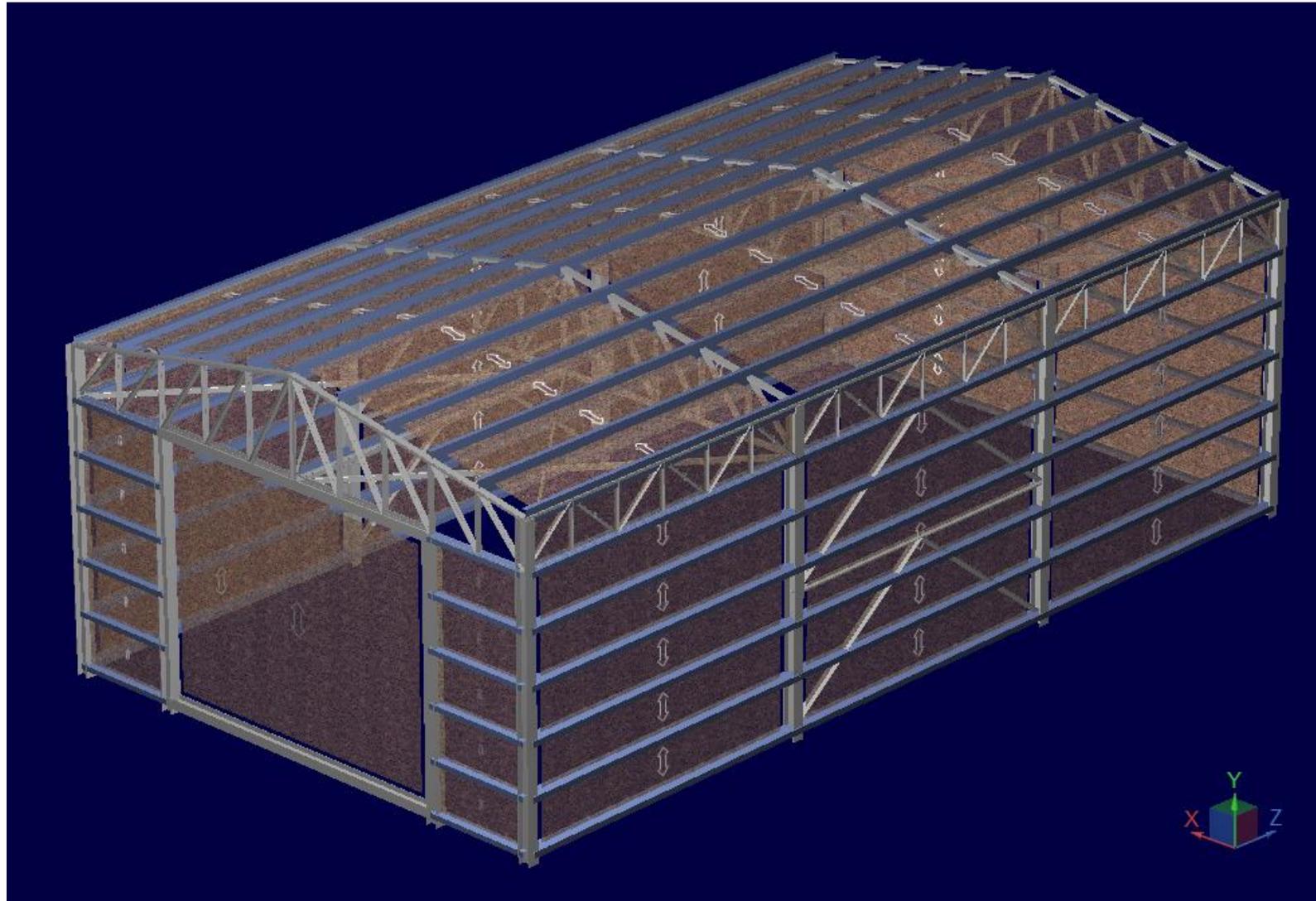
Túneles



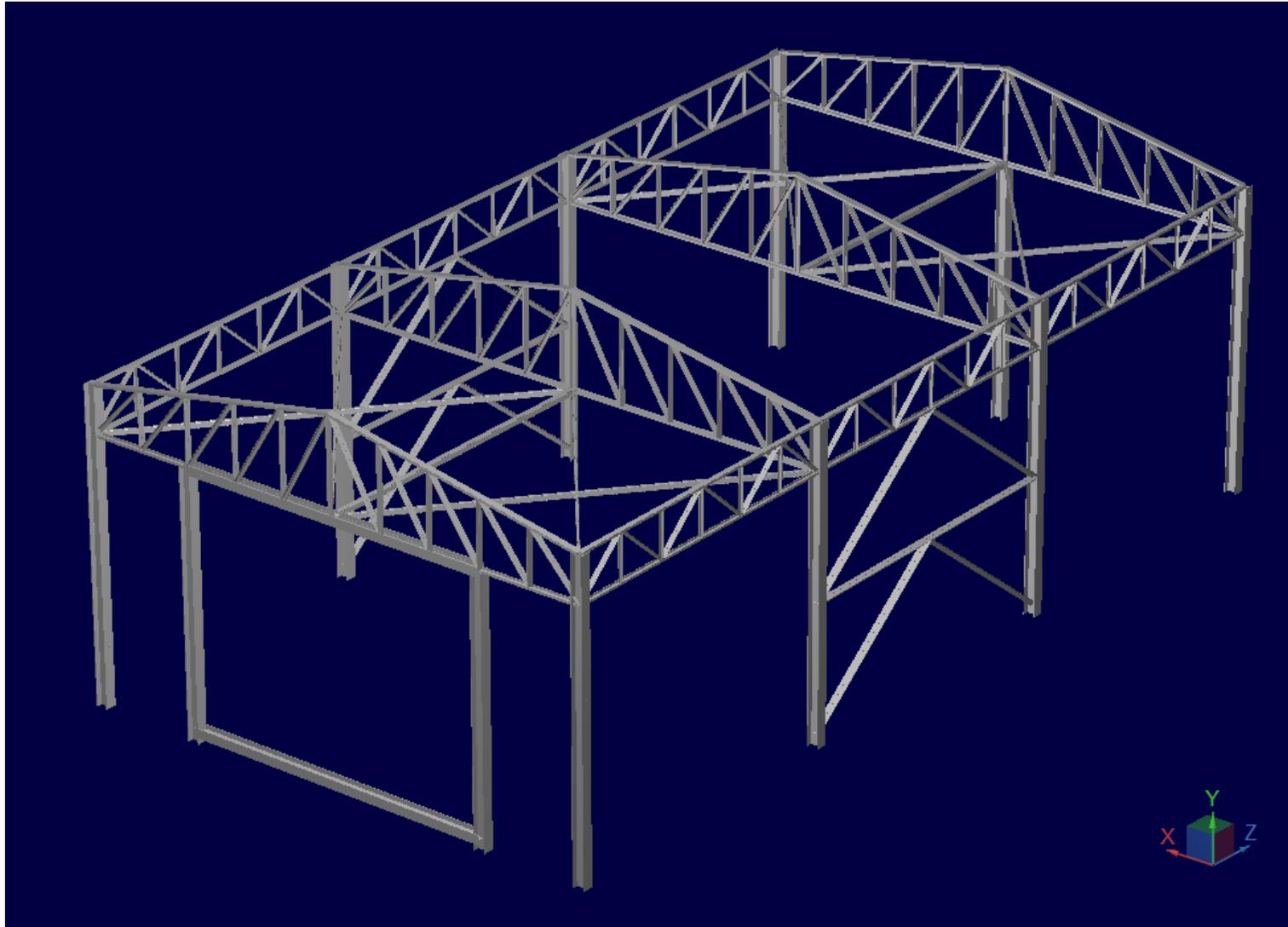
Modelo numérico - Pórtico (Estadio)



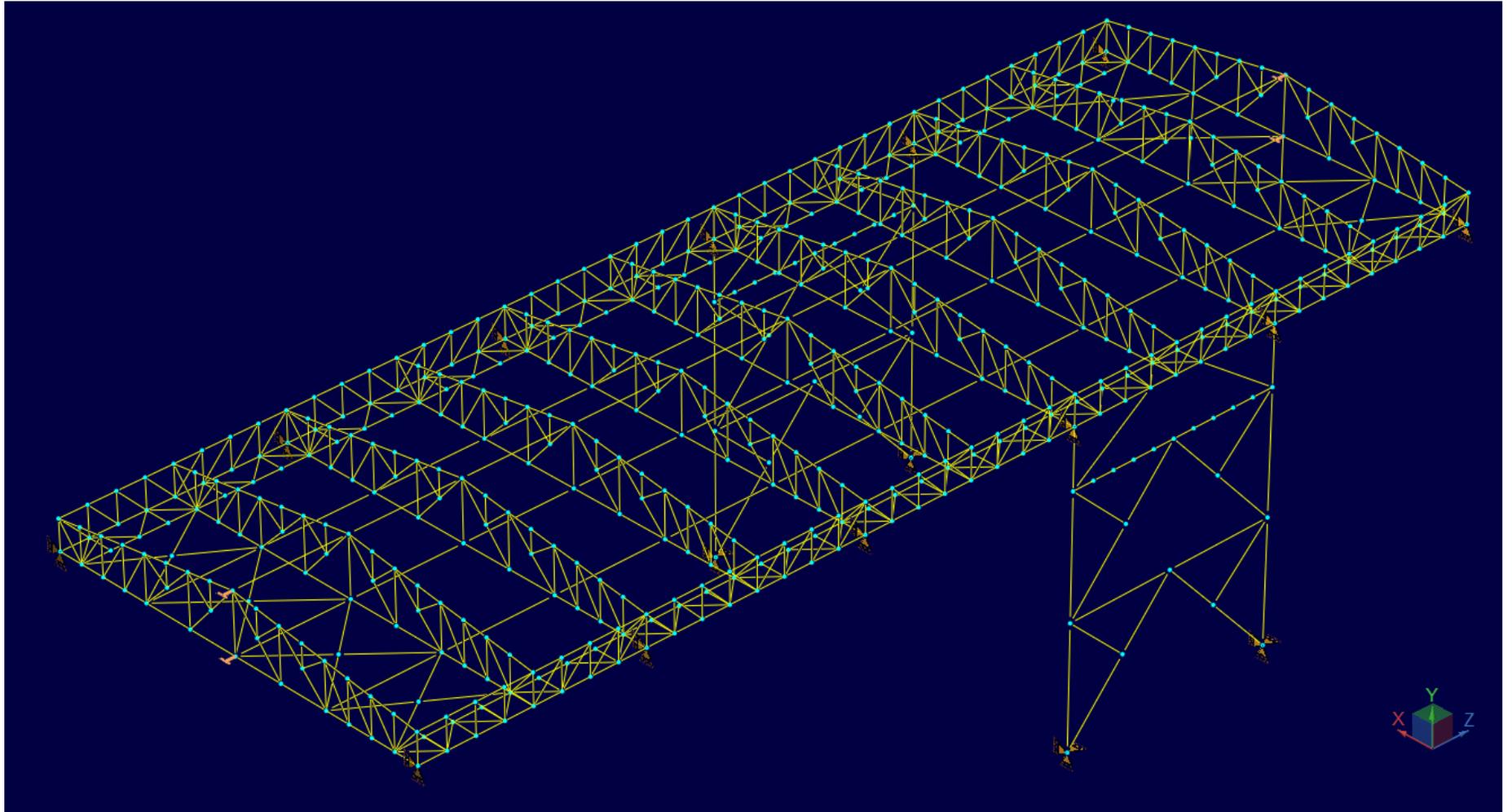
Modelo numérico – Nave industrial



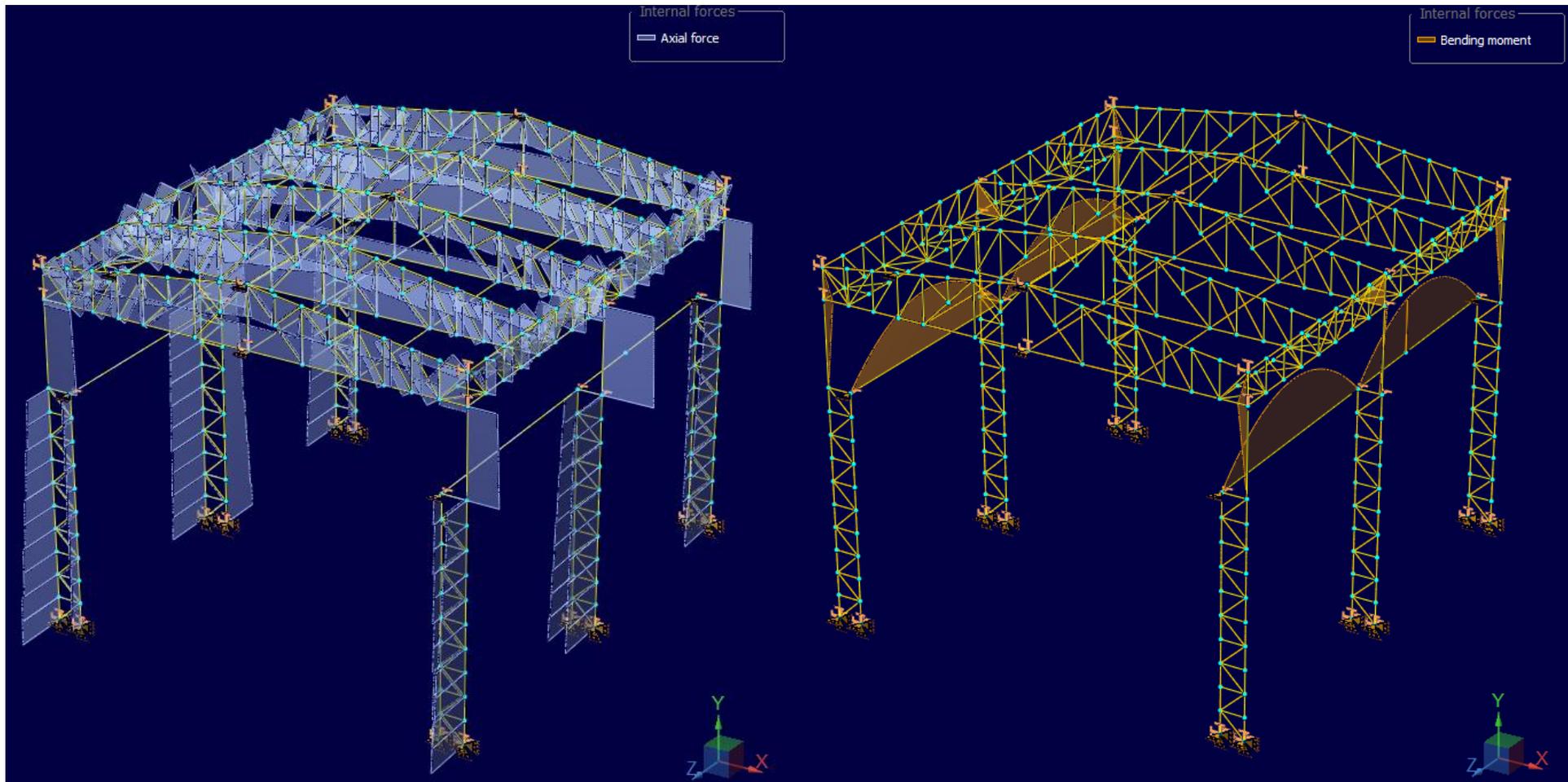
Modelo numérico – Nave industrial



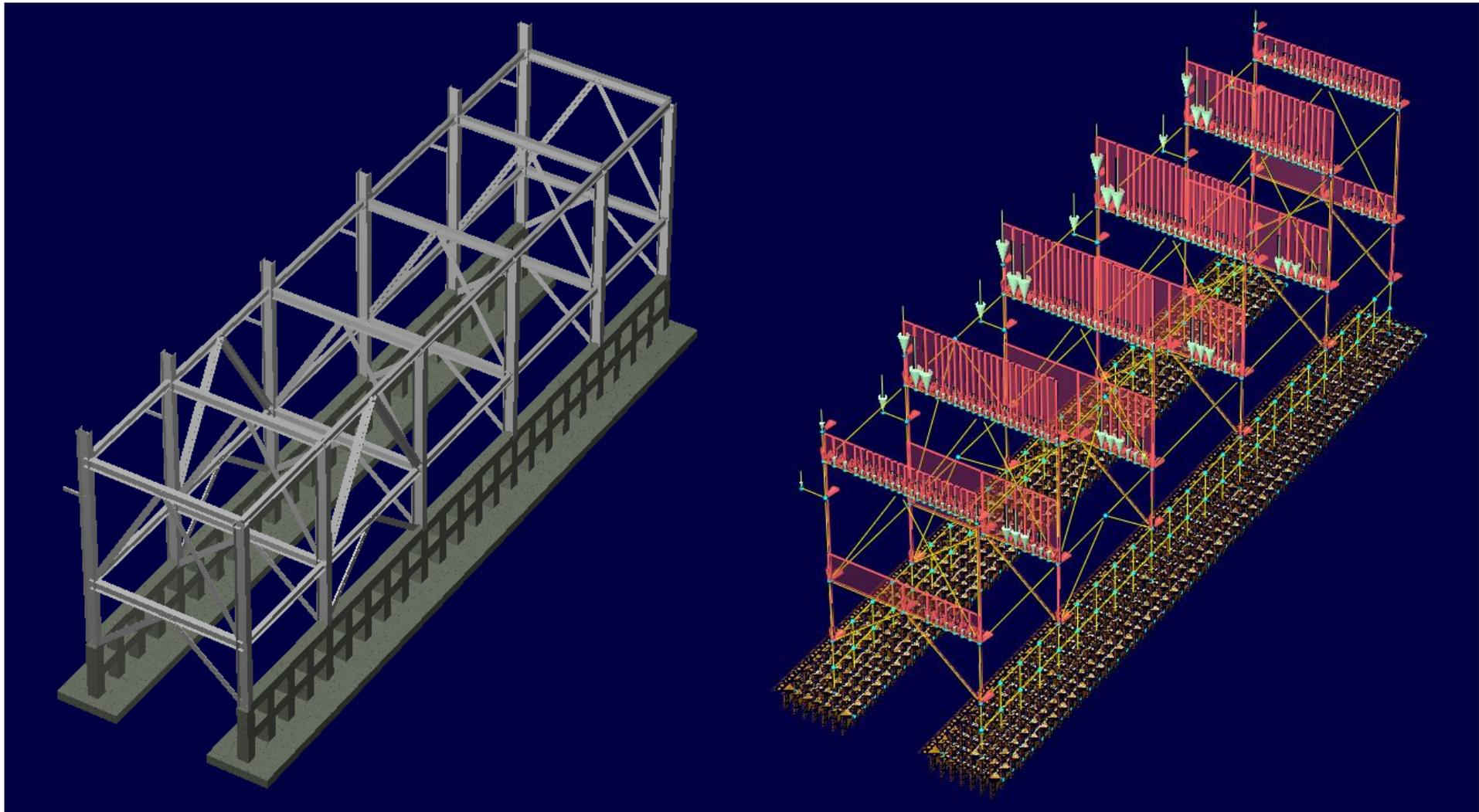
Modelo numérico – Nave industrial



Modelo numérico – Nave industrial



Modelo numérico – Nave industrial

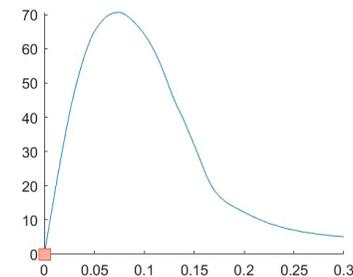
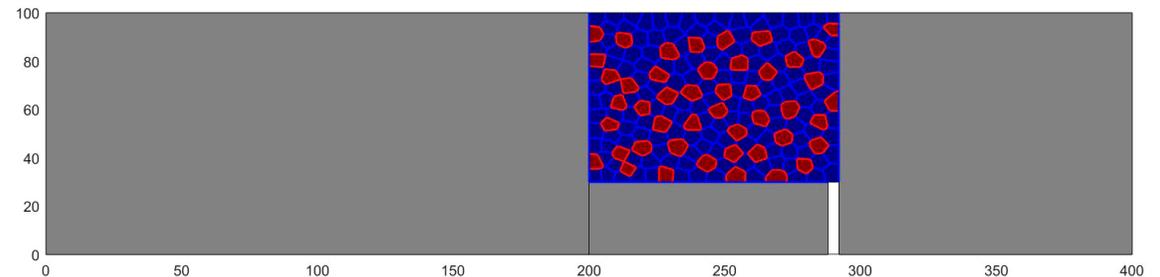
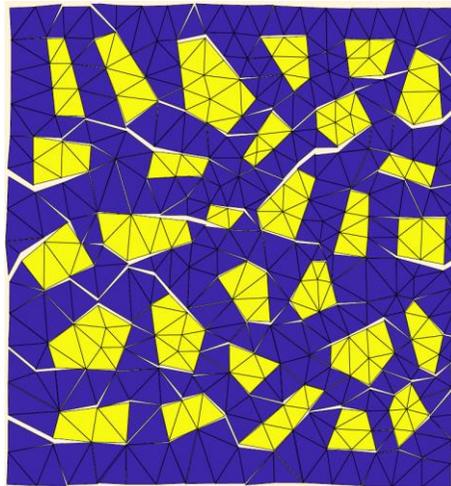


Mi Carrera

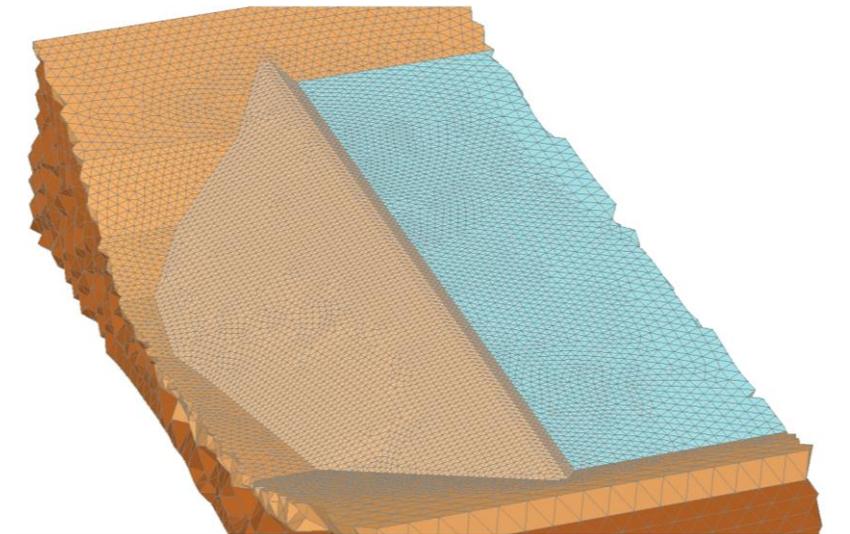
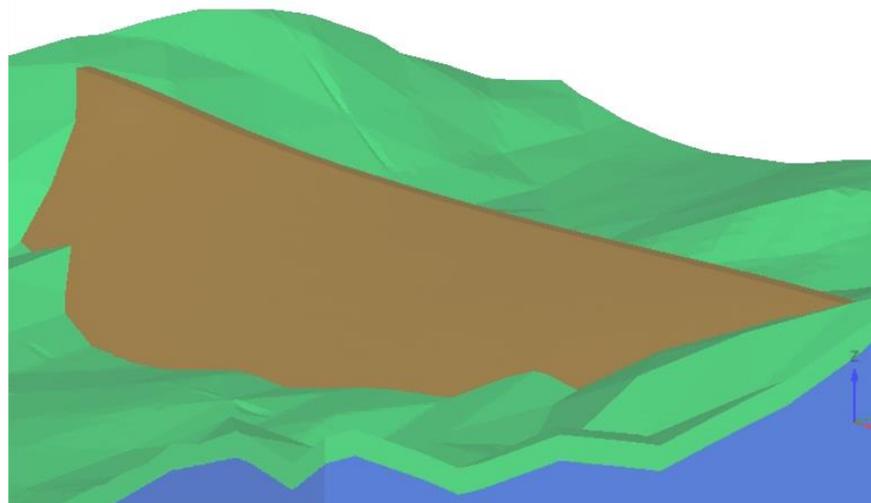
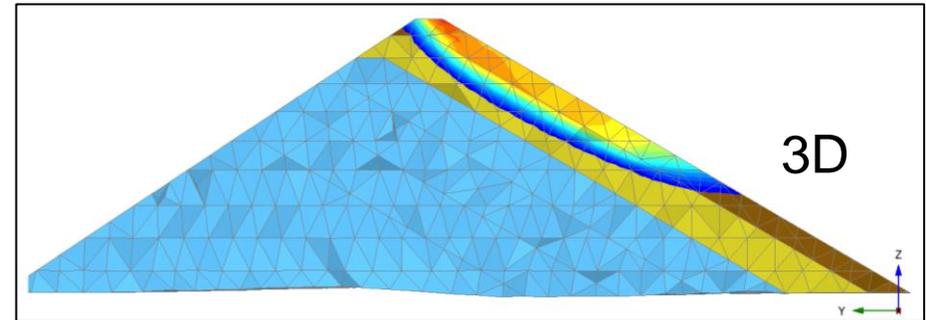
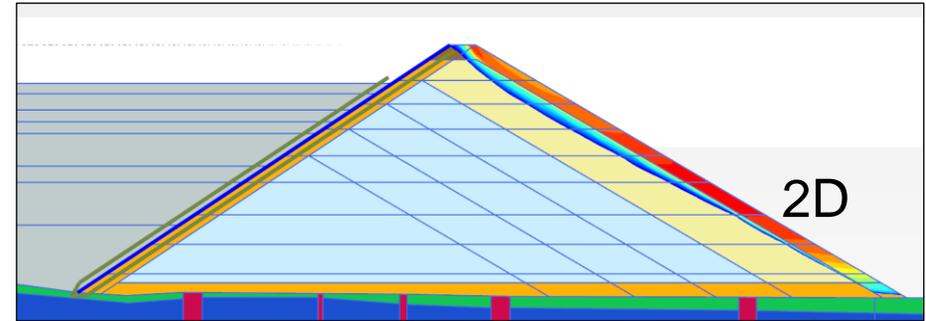
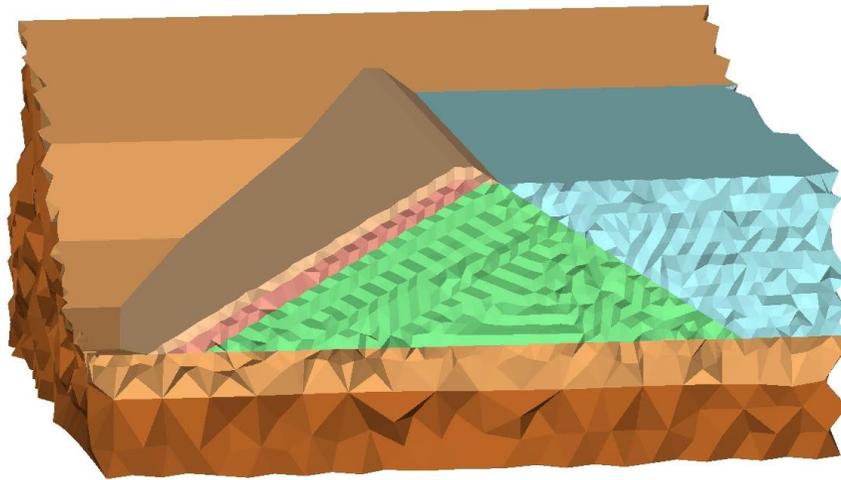


- Ingeniero Civil (FIUBA) – Estructuras
- Doctorado – (FIUBA)
 - Modelos numéricos
 - Modelos constitutivos

- Multiescala
- Homogeneización



Geotecnia Numérica



Temas de la materia

- Geometría de las superficies

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- Sistemas de Alma llena

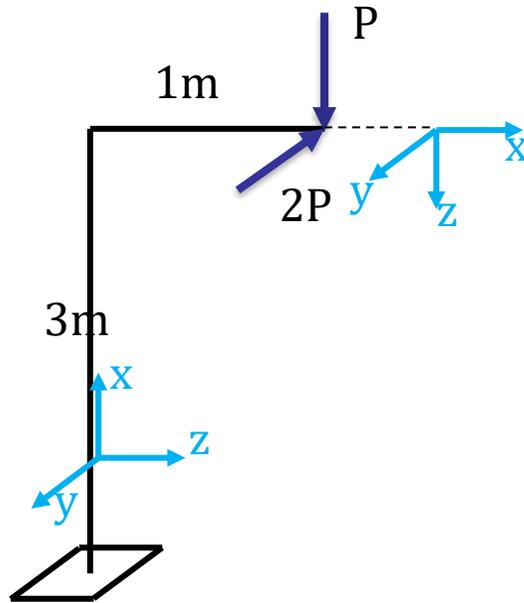
} Estática

- Solicitación Axil
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- Solicitación por Corte

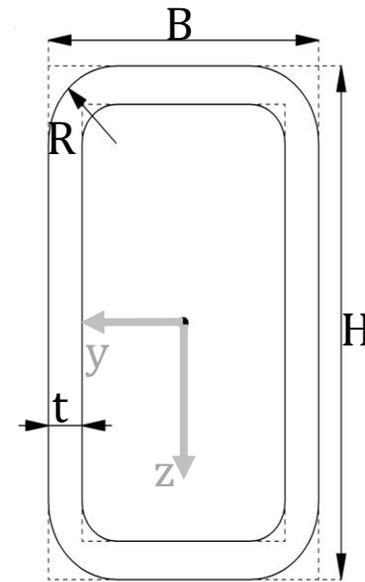
} Resistencia de Materiales

- Segundo Orden (Pandeo)

Ejercicio Espacial 1:

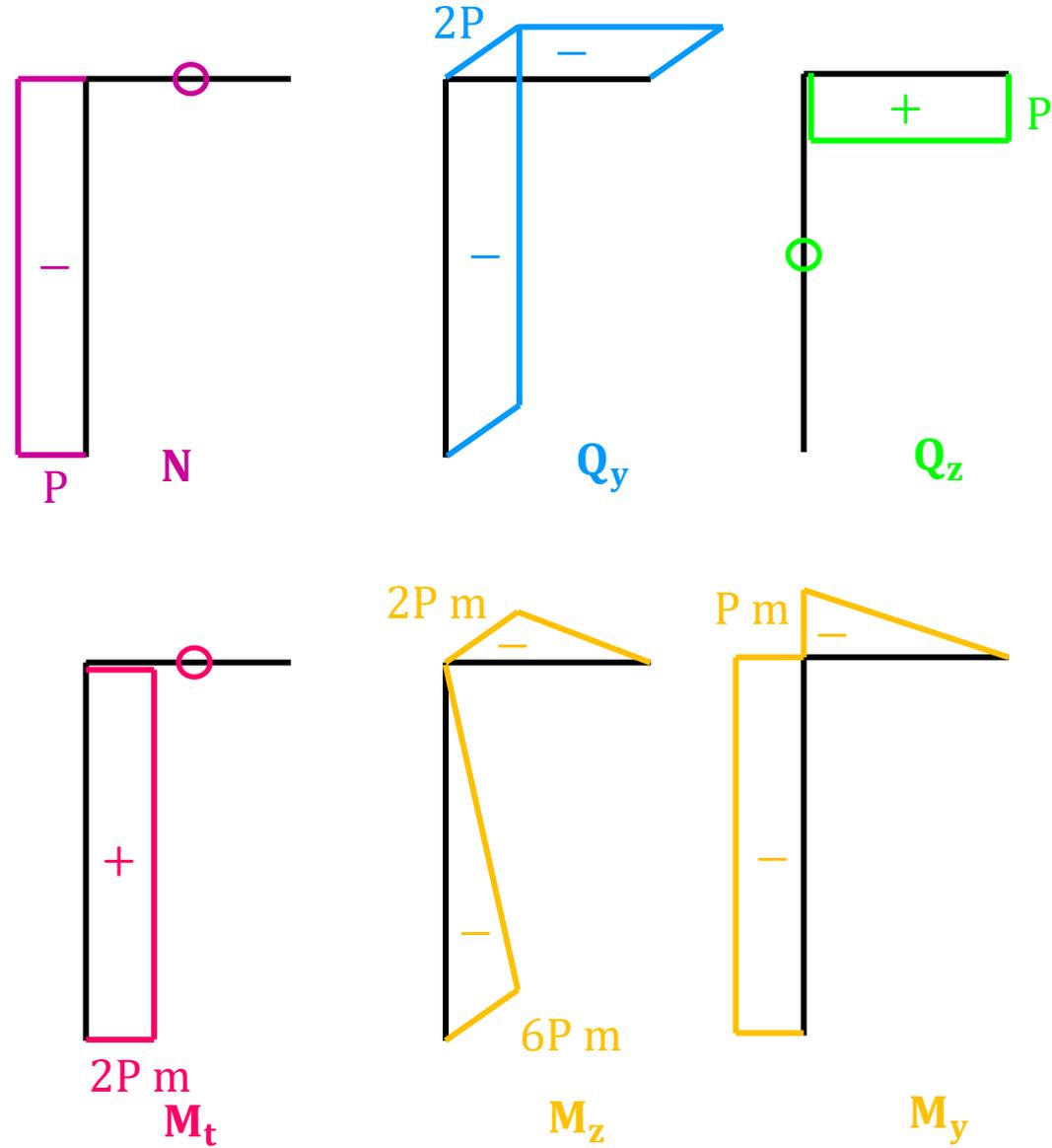
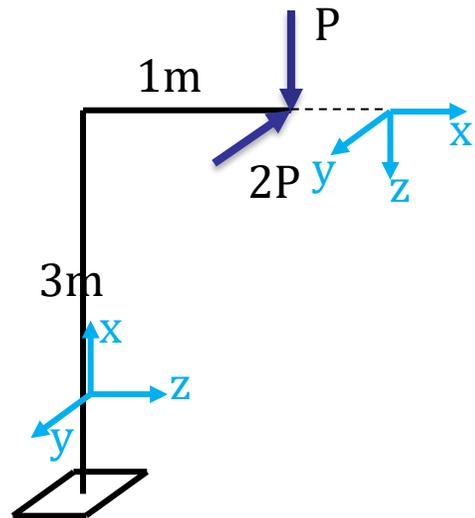


Perfil Tubo Rectangular

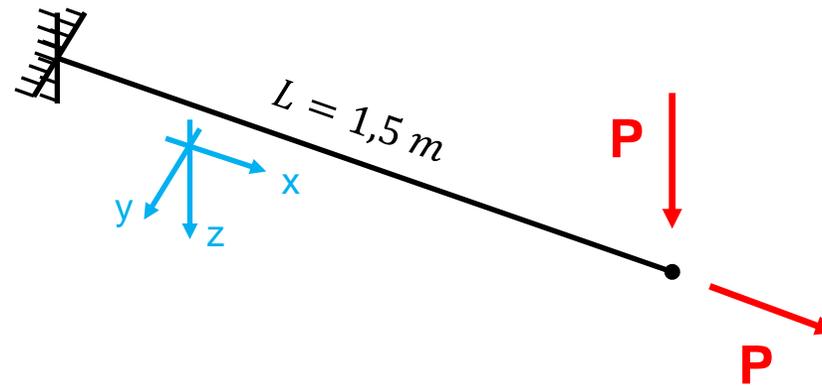


¿Como orientamos el perfil?

Diagramas de características



Ejercicio Espacial 2:



Datos:

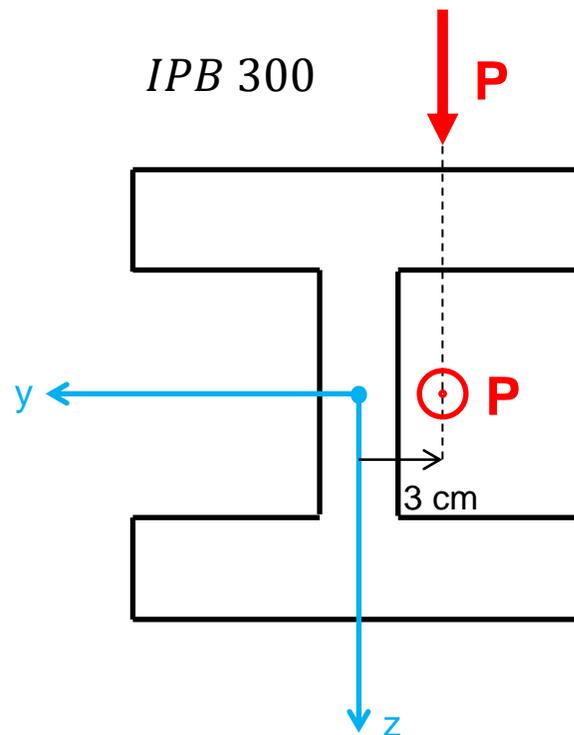
$$P = 60 \text{ kN}$$

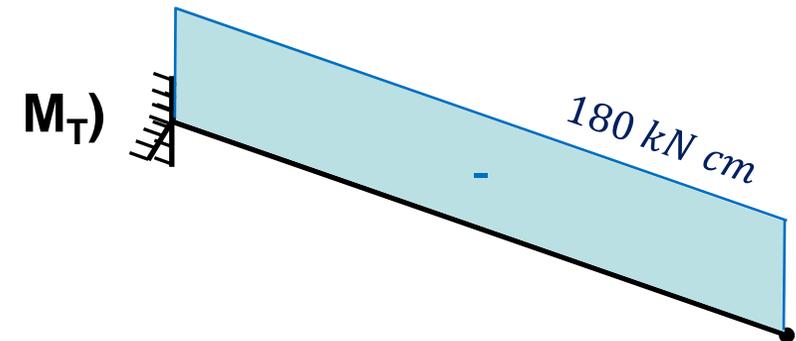
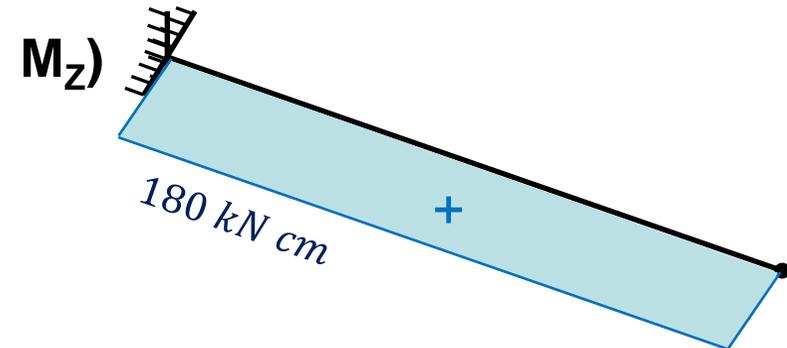
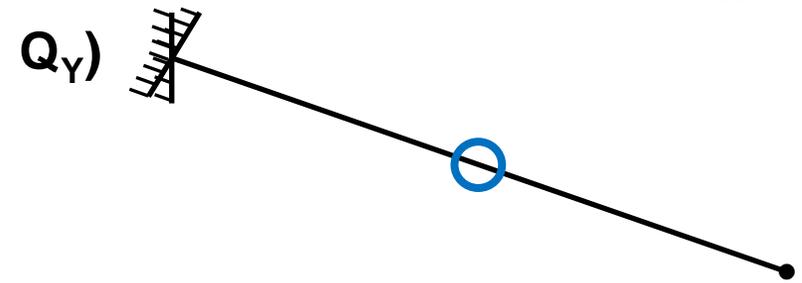
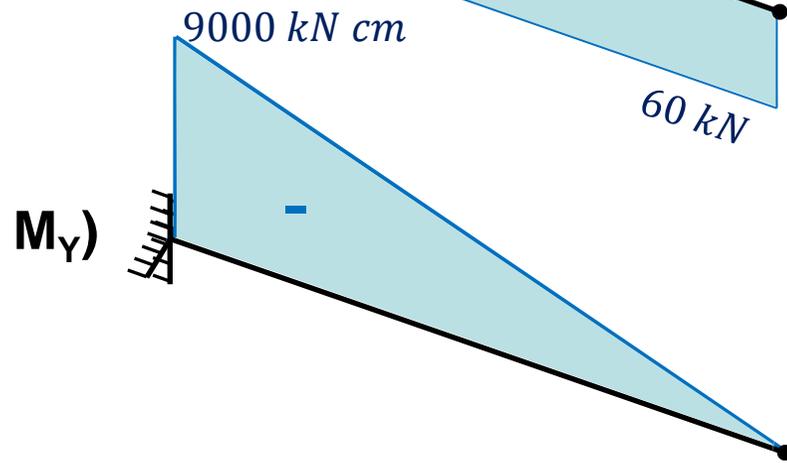
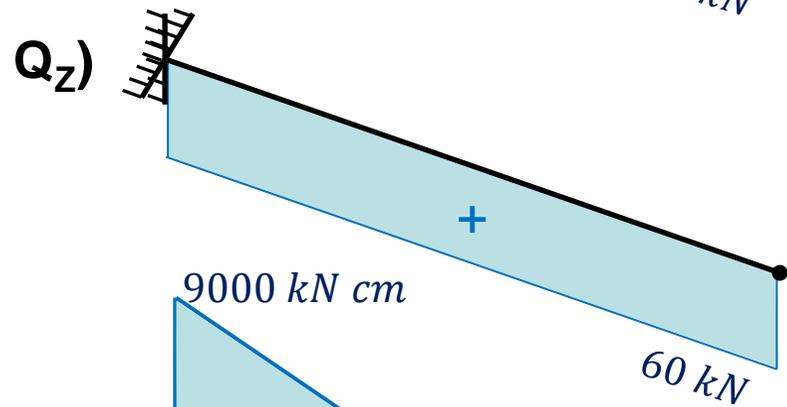
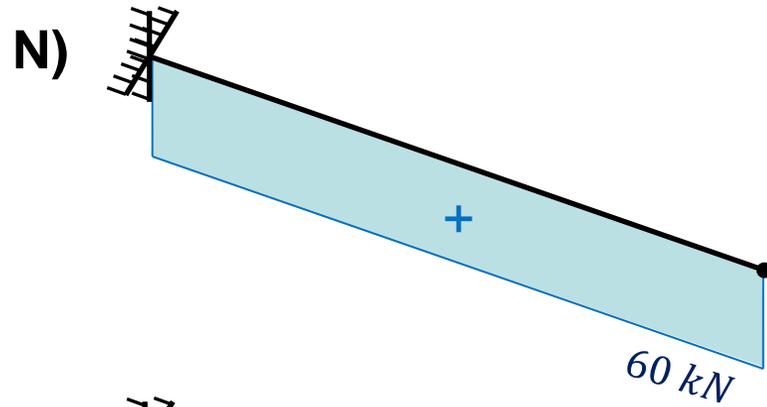
$$E = 21000 \frac{\text{kN}}{\text{cm}^2}$$

$$\sigma_F = 24 \frac{\text{kN}}{\text{cm}^2}$$

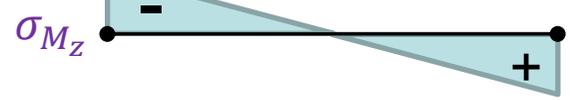
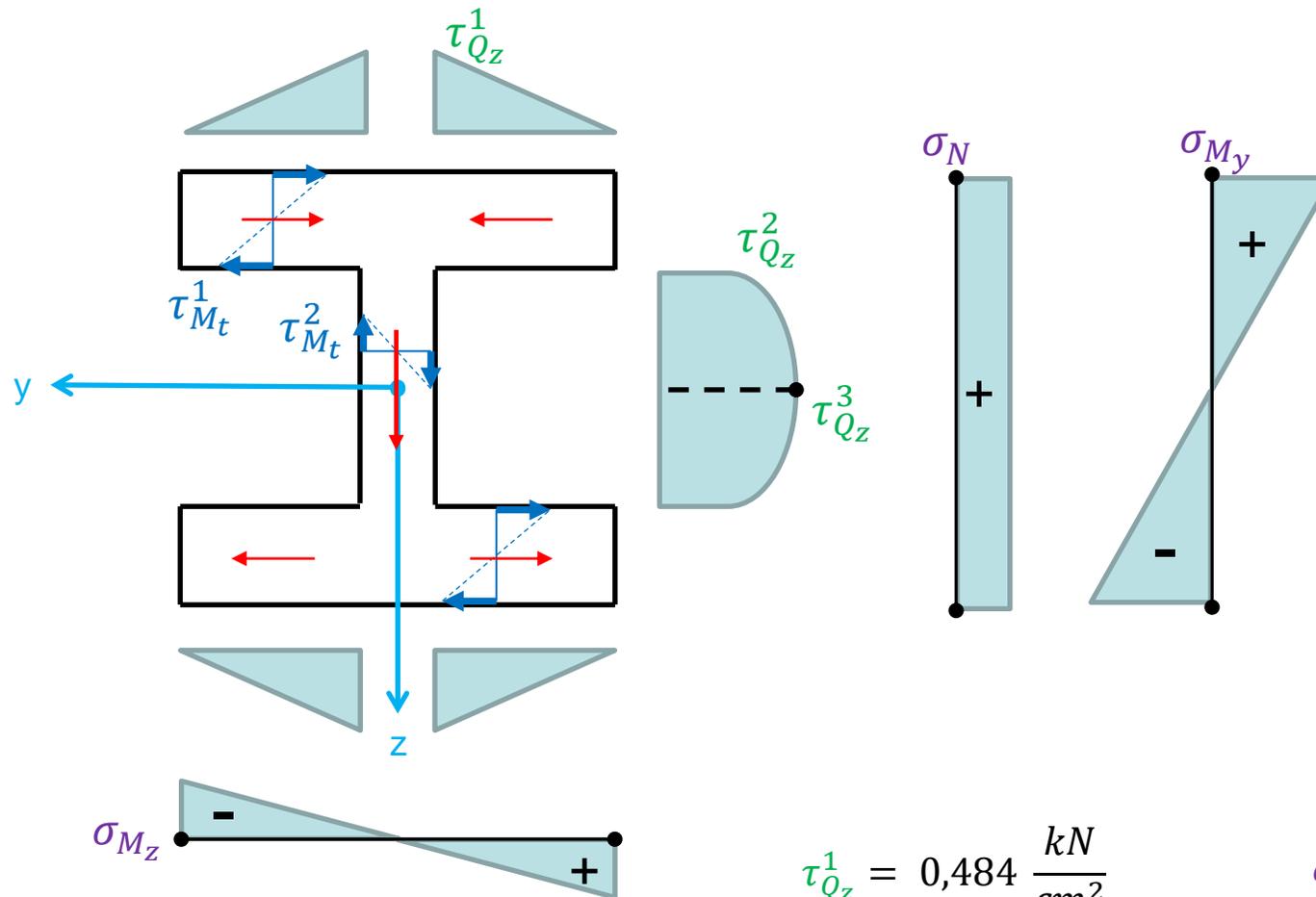
$$\mu = 0,25$$

¿Verifica el perfil?





¿Qué sección verificamos?



$$|\tau_{M_t}^1| = 2,295 \frac{kN}{cm^2}$$

$$|\tau_{M_t}^2| = 1,329 \frac{kN}{cm^2}$$

$$\tau_{Q_z}^1 = 0,484 \frac{kN}{cm^2}$$

$$\tau_{Q_z}^2 = 1,736 \frac{kN}{cm^2}$$

$$\tau_{Q_z}^3 = 2,024 \frac{kN}{cm^2}$$

$$\sigma_N = 0,403 \frac{kN}{cm^2}$$

$$\sigma_{M_y} = 5,364 \frac{kN}{cm^2}$$

$$\sigma_{M_z} = 0,315 \frac{kN}{cm^2}$$