



SAPIENZA
UNIVERSITÀ DI ROMA

SAPIENZA UNIVERSITÀ DI ROMA
FACOLTÀ DI INGEGNERIA CIVILE E INDUSTRIALE
INGEGNERIA AMBIENTE E TERRITORIO



INSEGNAMENTO DI **SCIENZA DELLE COSTRUZIONI**

a.a. 2025-2026

prof. Paolo Casini

(E18)

Flessione e Taglio/2

Esercizi 1-8. Si consideri il problema della **flessione e taglio** in travi le cui sezioni normali tipo siano rappresentate nelle figure 1-10: determinare e diagrammare l'andamento delle tensioni tangenziali dovute al taglio (Teoria approssimata di Jourawsky). Si suppongano noti i momenti principali d'inerzia I_x e I_y .

The figure displays eight different cross-sections (1-8) for shear stress analysis. Each diagram shows the cross-section with dimensions (widths of b), centroid (G), shear center (C_T), and applied shear forces (T_x , T_y).

- 1:** I-shaped section with flanges of width b and web of width b . Shear force T_x is applied horizontally.
- 2:** C-shaped section with flanges of width b and web of width b . Shear force T_y is applied vertically.
- 3:** I-shaped section with flanges of width b and web of width b . Shear force T_x is applied horizontally.
- 4:** T-shaped section with a top flange of width b and a stem of width b . Shear force T_y is applied vertically.
- 5:** Hexagonal section with side length b . Shear force T_y is applied vertically.
- 6:** Section with a vertical stem of width b and a horizontal top flange of width b . Shear force T_y is applied vertically.
- 7:** Section with a vertical stem of width b and a horizontal top flange of width b . Shear force T_y is applied vertically.
- 8:** Section with a vertical stem of width b and a horizontal top flange of width $2b$. Shear force T_y is applied vertically.

COGNOME.....

NOME.....

MAT.....

SITO

www.pcasini.it/disg/sdc

Soluzioni: Cap. 21, § 21.11, 21.12 (4° edizione)