

CE.413

CE 413 - Special Steel Structures*

* a course recommended for 4th year students in Civil Engineering – training in English program

What are they?

- particular types of civil engineering structures made of steel
- special in terms of: human occupancy, function, dynamic response, risk to society
- components of high order technical systems that are **CRITICAL FOR NOWADAYS SOCIETAL NEEDS**

Why this course?

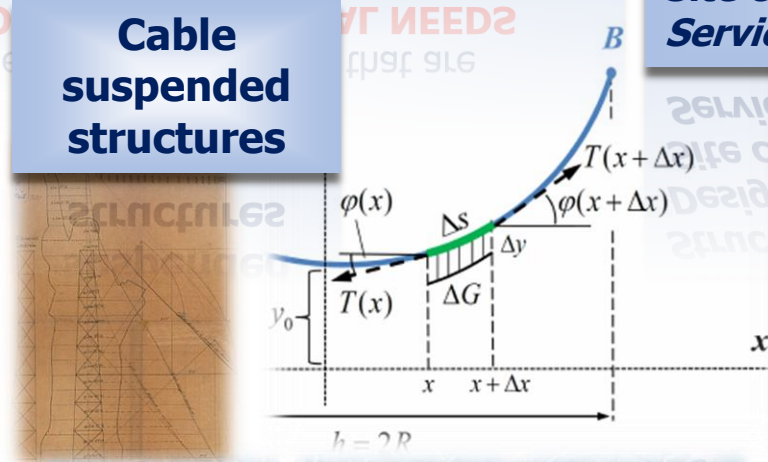
- for an increased understanding of the **INTERDEPENDENCE** among:
 - Conceptual design*
 - Structural analysis*
 - Design and detailing*
 - Site construction*
 - Service & Maintenance*

SYSTEM THINKING APPROACH

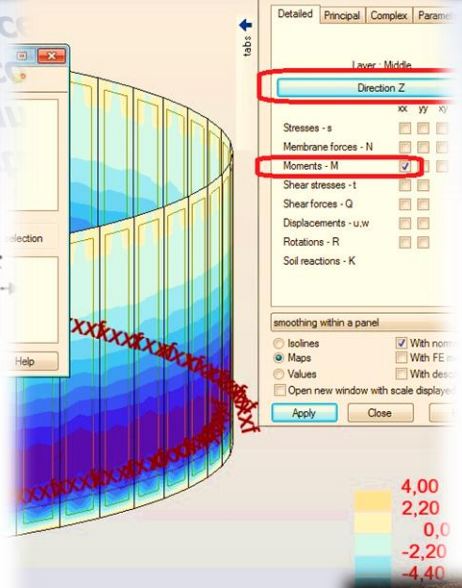
Space lattice towers



Cable suspended structures



Space frame structures



Steel storage structures



Appropriately state problems, find innovative solutions in a sustainability driven, continuous learning-based culture



STEEL

Steel is a metal alloy composed of iron, carbon and few other elements

Has a higher weight

Not corrosion resistant and rusting occurs easily

Easily welded

A hard metal alloy with a high density

Has a very high melting point

LIGHT METALLIC STRUCTURES

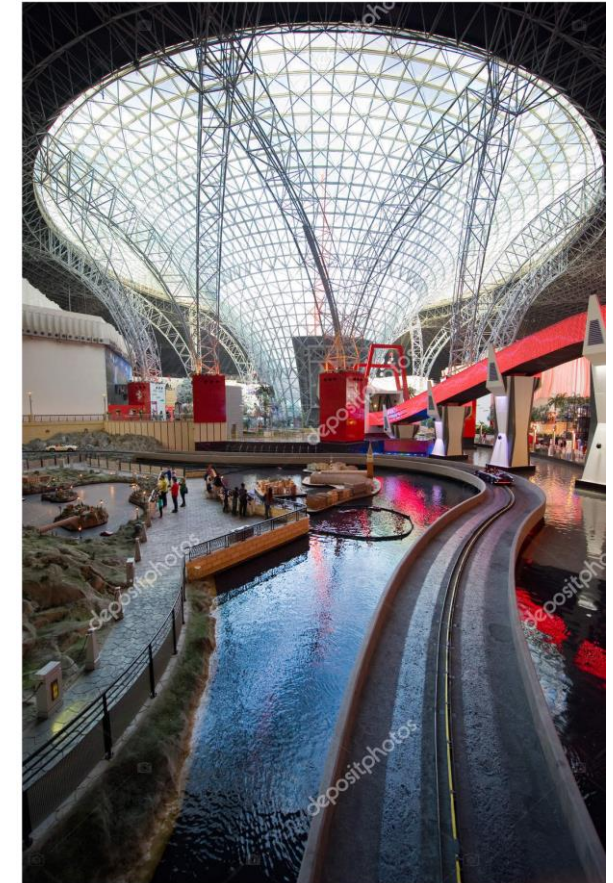


DEPARTMENT OF
CIVIL AND INDUSTRIAL ENGINEERING



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ALUMINIUM

Aluminium is a soft metal with a silvery-gray color

Light-weighted metal

Resistant to corrosion and rusting

Somewhat difficult to be welded

A soft metal with relatively a low density

Has a lower melting point