

# **HELICOIDS AND ARCHITECTURE: GEOMETRIC GENESIS, DIGITAL APPLICATIONS AND SOLUTIONS**

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## **Program:**

- Geometric genesis of surfaces: helices and helicoids.
- Representation of helices and helicoids.
- Architectural examples: the case of the Guggenheim Museum in New York by Frank Lloyd Wright.
- 3D modeling and digital representation of architectural helicoids.

## **References:**

- A. Giordano, *Cupole, volte e altre superfici. La genesi e la forma*, Utet: Torino 1999.
- C. Monteleone, Frank Lloyd Wright. *Geometria e astrazione nel Guggenheim Museum*, Aracne: Roma 2013.
- J. Stillwell, *Geometry of Surfaces*, Springer: Cham 1992.
- S. Kobayashi, E. Shinozaki Nagumo, *Differential Geometry of Curves and Surfaces*, Springer, Cham 2019.

## **Examination and grading:**

- students will be valuated basing on the exercises to perform in the classroom.

## **Course details:**

In-person