

# BIOINSPIRED ARCHITECTURAL ENVELOPE

The project aims to create an envelope, awning or venetian blind, based on extrapolation of qualities of natural elements for the application thereof to architectural technical implementations. Thus, a prototype of spatial mesh is developed, based on an inspirational process from the spider webs in nature.

The working method is the removal of an element of the natural world, in this case the spider web, for its study and analysis, according to the methodology of biomimicry science. Once we have understood its morphology, composition and special features, we proceed to do the evaluation and synthesis of the organism, in order to evaluate the potential applications for architectural envelopes. Through design process several interesting aspects of living organism are discovered, which when replicated in architectural forms interesting and potentially result in real space and tectonic possibilities. The bio-inspired envelope proposed presents a wide range of tectonic possibilities to apply to architecture. Future applications would be the combination of different materials with different permeabilities, for various uses, which offers endless architectural applications such as a filter of UV radiation, pollution or noise, and regulator of temperature, humidity or sunlight.

