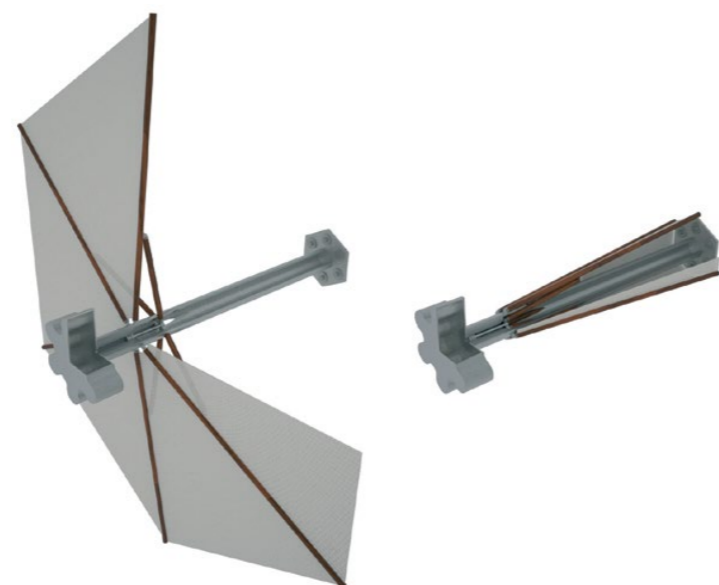


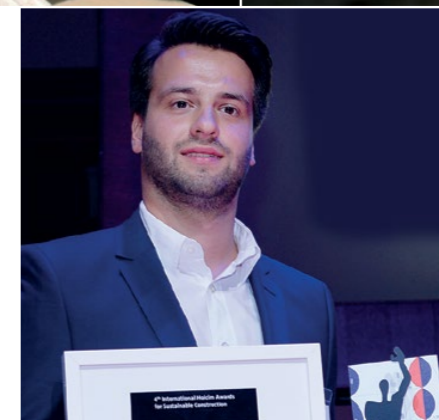
# Air-Shade

## Responsive sustainable shading system

Vienna, Austria



Cooling as a process is one of the biggest energy consumers in the building sector around the globe. The project *Air-shade* from the Academy of Fine Arts in Vienna, addresses this problem by proposing a shading system that is sensitive to solar exposure and powered by air – with no need of any external energy source. Insofar as that it can vary in scale, size, material, and form, the proposed device is applicable to a broad variety of buildings, constructions, façades, roofs, windows, etc. Exposed to solar radiation, the air inside the umbrella-like units heats up and expands, allowing the armature to open. Conversely, when solar radiation diminishes the air cools down and the shutters close.



Pictured project author: Nikola Znaor, Academy of Fine Arts Vienna, Austria.

### Project appraisal by Holcim Awards jury Europe

The jury commends the exploratory nature of the project and its ingenious approach to problem solving. Particularly appreciated is the simple transfer of a low-technology artifact – in this case, an umbrella – to create a high-technology apparatus to shade buildings. Architectural design is here deployed as a method to investigate new sustainable construction techniques. Most successful in this exercise are the doubly-curved façades that constantly transform according to the intensity of solar exposure.