

MODULAR GREEN WALLS (MODGREW)

Goal of the project

The goal of the project is based on studies of natural elements' response to external stimuli. The study of modular green/vegetated wall systems aims to determine optimal responsive surface organizations, while testing materials and geometry in various conditions. The project uses digital modelling based on algorithms for simulation and testing of prototypes.

Short description of the project

MODGREW, modular green wall, is an interactive system that reacts to external stimuli.

Implementation period

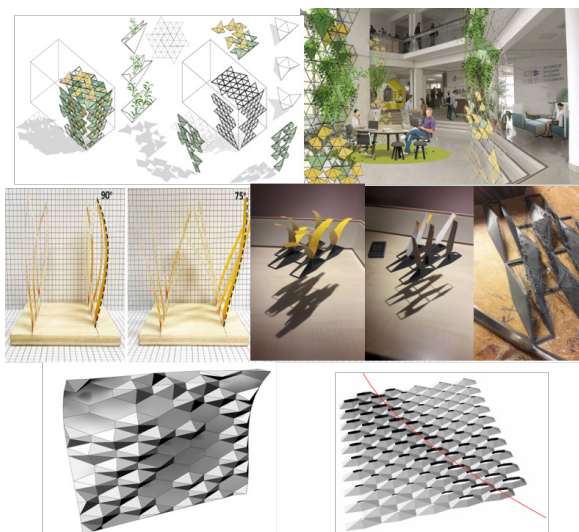
01.02.2019 – 15.06.2020

Budget

47.600 RON (10000 EUR)

Main activities

- The green installation concept is made out of interactive modular systems, creating a new, living, dynamic, interactive structure whose inspiration is taken from nature while using biomimicry as main principle for its development. This new concept responds and is influenced by external, natural stimuli or by the human factor. We added a new direction to the research in order to use simple materials (wood/ pvc) that react to external environmental stimuli (humidity, light, movement). We aim to use the minimum required sensors to supplement certain actions in a simple "natural" manner.



Results

- The presentation of the research results is done in specific international conferences and articles written for journals and symposiums. Their materialization involved the realization of prototypes at different scales.
- The estimated impact of the project in the scientific context can be significant in the direction of transforming a simple support for plants into an interactive mechanism that takes into account the natural growing needs of the sustained plants. Inspired by nature, and how plants and simple materials react to external light, temperature and humidity, the proposed interactive structure acquired an exterior skin to optimize environmental interaction.

Applicability and transferability of the results:

This new architectural concept inspired by kinetic and biomimetic design, represents an innovative approach to existing environmental elements, opening new directions of research.

Research team

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