* 1. Abstract

Abstract section of the paper, the position of the work in terms of contributing a theoretical approach, computational method or fabrication technique (or combinations of these) should be clearly and concisely stated. The results of the research and major contributions should be briefly stated. The abstract should be a maximum of 250 words.

* 1. Introduction and Backgrounds

The objectives of the work are to be stated and placed within the context of relevant research. The research can reflect the author's previous work, but should also cite original sources that led to the development of their specific body of research. Proper references to journal articles and/or conference papers must be used when describing the precedent work. It is expected that a Short Paper will have a more condensed description of precedent and background work, consolidated into the Introduction section.

* 1. Methods

In the Methods section, the novel techniques developed in the work should be stated so that they can be understood and reproduced by someone in the field of computational design and digital fabrication

* 1. Results and Discussion

For the Results and Discussion, the outcome of the work should be clearly described and depicted. The author's work should be placed in the context of computational design and indicate its contribution to previously cited work. Authors must provide a critical summation of their research offering successes and failures in relation to the original hypothesis. It is expected that a Short Paper will focus more on the discreet outcomes of the work, over its larger implications to the field of computational design.

* 1. Conclusions

The Conclusion section should describe the future development of the work and provide a reasonable projection of the research into future applications. Such propositions should be grounded in the precedents that were originally stated in the hypothesis for the research.

SYMBIOTIC ASSOCIATIONS

a research about the digital impact on soil remediation

* 1. Abstract

+ methods to look at biology

+ mycelium case

+ apparatus

+ technical definition of the methodology

+ possible implication of conclusions

Biology has established in recent years as a crucial contributor in the definition of design strategies. The observation of biological phenomena becomes indeed the first method to extract patterns for the deconstruction and assembly of multiple behaviors connected to specific environmental conditions. A clear workflow of digitalization of those physical outputs becomes indeed necessary to establish accurately specific growing patterns. Mushrooms haven already been involved into several design process mainly for their structural characteristics defined by a lightweight fibrous constitution and their fast mycelium growing abilities. In all recent experimentations involving mycelium, a scientific method of data collection have not be defined. The research developed for the workshop Symbiotic Associations focused on the construction of physical apparatuses hosting oyster mushrooms, belonging to the family of Pleurotus species. From every machine data have been extracted through 3dscanning techniques and then parsed according to the physical information stored in the point cloud, using computational methods to recalculate principal growing directions. The influences of temperature and nutritional conditions on the mycelium growth were part of the variables tested during the conduction of the experiment. This research is focused towards the definition of a catalog of growing conditions established through a rigorous observation empowered by computational methods. The overall experiment is part of a larger research empowering the contribution of digital fabrication and computational techniques in the biological process of soil remediation involving mushrooms, defined as mycoremediation.

* 1. Introduction and Backgrounds

+ Problem of contamination

+ Food Production

+ Mycoremediation

+ Drone Technology / Nero

+ Glocal

Land Pollution has led, to a series of issues that we have come to realize in recent times, after decades of neglect. The increasing numbers of barren land plots and the decreasing numbers of forest cover is at an alarming ratio. In agriculture, toxic levels of various elements pollute the groundwater as a result of excessive fertilizer application (e.g., nitrates and phosphates), and through leaching of naturally occurring trace elements in the soil after irrigation (e.g., selenium). Pollution of both water and soil poses a significant hazard to human health.

* 1. Methods

+ Research Protocol: digital and analog

+ Apparatus

+ Substratum

+ 3d scanning

+ Point cloud construction

+ Reading data

+ Parsing the cloud

+ Extracting growing pattern

In the Methods section, the novel techniques developed in the work should be stated so that they can be understood and reproduced by someone in the field of computational design and digital fabrication

REFERENCES

https://github.com/Aldo23/SYMBASS