



BioEcological Education

a new way to learn

Speakers

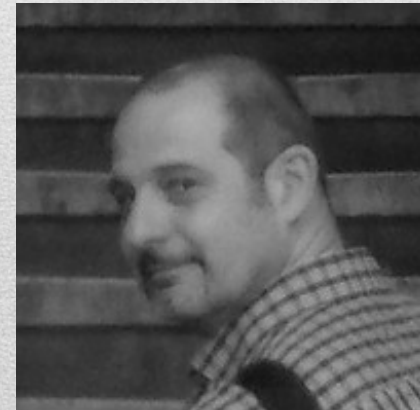
Alessandro Bertirotti



Viviana Deruto



Mario Moschi





MaVE Material Value Exposure

Speakers

Viviana Deruto Director of **IRSA** **R**esearch **I**nstitute of **L**iving **S**cience
President of **Progetto Casa BioEcologica** **A**ssociation



- Understanding that climate change also depends on our daily choices is fundamental
- Correcting our habits, even slightly, can be decisive
- From food to construction, everything passes through industry, but, even before that, through market research
- The market responds to our requests, not our real needs: proper bio-ecological education can contribute to a lower impact on the environment

Current situation



PROBLEMS



- Pollution
- Energy consumption
- Environmental impact



Current construction sector

In this process it's important to grasp terms such as:

- **sustainable**
- **development**
- **renewable energy**
- **biocompatible materials**
- **conscious use of resources**



GREEN UTOPIA events 2019 for a green architecture

BioEcological Education



Today more than ever it's important to understand that in all sectors, but above all in the construction sector, it's important to correctly transmit information in order to promote the formation of a new generation aware of their choices

BioEcological Education

For this it's necessary not only to explain, but to prove that a new construction system is possible and advantageous, not only for energy savings, but also for health reasons, because health has a cost

- **Economic**
- **Environmental**
- **Social**

and covid taught us very well



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ADVANTAGES

- LESS Pollution
- LESS Energy consumption
- LESS Environmental impact

Future construction sector NATURAL AND RENEWABLE MATERIALS



The **MaVE-Material Value Exposure research** (which was included in the “CORE-WOOD” project for woodcomfort, livability and multifunctionality of wooden structures, that has been developed in collaboration with the TESAF Department of the University of Padua, Italy), focused on an underestimated aspect: the **biophysical interaction with materials present in the built environment**.

MaVE Material Value Exposure



The **protocol** of MaVE research was developed by **IRSA - Research Institute of Living Sciences** to investigate

emotional psychological aspects

and

biophysical reactions,

demonstrating that the materials have a real interaction with us, and that building materials are responsible for the perception of comfort and well-being in built spaces.

IRSA Research Institute of Living Sciences

Is a new way of thinking architecture which looks at two different aspects:

- **Humans**
- **Enviromental**

Because there isn't one without other



MaVE Material Value Exposure



**The MaVE prototype
built with natural materials**



Future construction industry REFURBISHMENT AND MAINTENANCE

Speakers

Mario Moschi



Forestry Doctor and Wood Technologist

**Vice President of ANTIAL National Association of
Wood Technologist, Engineers and Architects**



- From the postwar period to today, the woods have undergone major changes dictated by the purpose of use ...
- ... therefore new materials and new approaches in managing the environment in designing, building, recycling and educating new technicians.

Future construction industry NEW MATERIALS AND APPROACHES



Sofie Project by CNR IVALSa

The CNR - IVALSa (National Research Council - Institute for the enhancement of wood and tree species) in collaboration with the NIED (National Research Institute for Earth Science and Disaster Resilience) of Tsukuba (JP) has carried out a project aimed at development of construction systems through the use of Xlam panels starting from the selection of the starting wood up to the seismic and fire resistance tests of the entire building, through the characterization of the panels and anchoring systems

Future construction industry NATURAL AND RENEWABLE MATERIALS



The preliminary study (diagnosis) is a fundamental phase for the conservation of a wooden structure. With the diagnosis it is possible to know not only the current state, but also the evolution that the structure has undergone throughout its history. This allows us to intervene in a targeted manner by implementing an adequate choice of the type of intervention, materials and methodologies to be used, allowing us, in most cases, to preserve the structure rather than replace it

Future construction industry REFURBISHMENT AND MAINTENANCE



LESS

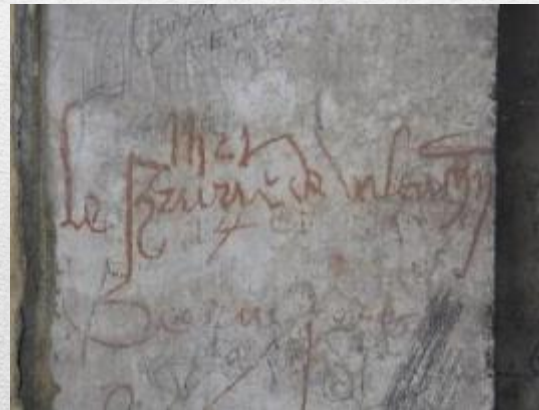
Environmental impact

INCREASED

Protection of the existing architectural heritage

GREATER

Savings



Future construction industry REFURBISHMENT AND MAINTENANCE



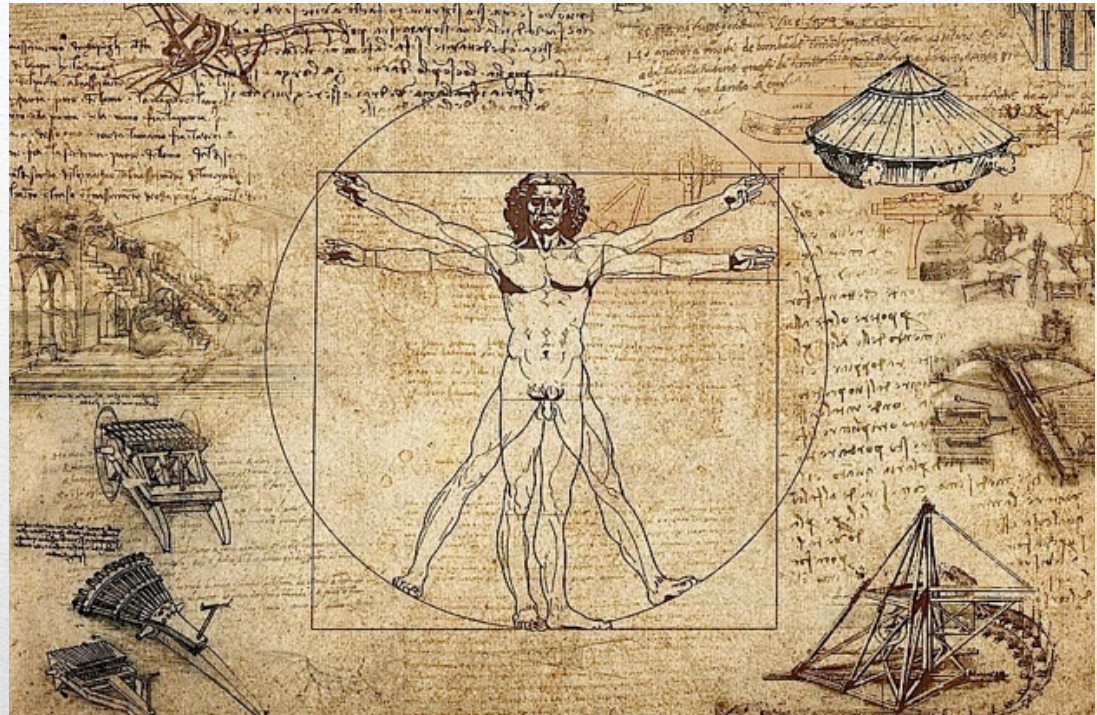
PRIVATE, PUBLIC SPACES AND AWARENESS

Speakers

Alessandro **Bertirotti** Adjunct Professor of Psychology for Design
University of Genoa



- A redefinition of this differentiation
- The traditions of the ancient Italian Renaissance workshops:
an apprenticeship topic
- Relationship between teacher and pupil



BioEcological Education Private & Public Spaces



Progetto Casa Bio Ecologica

- Universal and general characteristics and cultural declinations
- Individual responsibility and public collaborative behaviour
- As human beings, cosmos and the uterus containing us, because we are environment

BioEcological Education is EDUCATING for AWARENESS

KNOWLEDGE

Knowing means understanding and choosing materials for their characteristics, not only physico-chemical, but also of biophysical response, which can help us improve the perception of well-being within the built environment

BioEcological Education



KNOWLEDGE

- If I know I understand
- If I know I choose
- If I know savings:
time,
money,
energy,
health

BioEcological Education





IRSA

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Research Institute of Living Science

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Thanks for Your attention