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MORE THAN HUMAN DESIGN

Transitions Curricula

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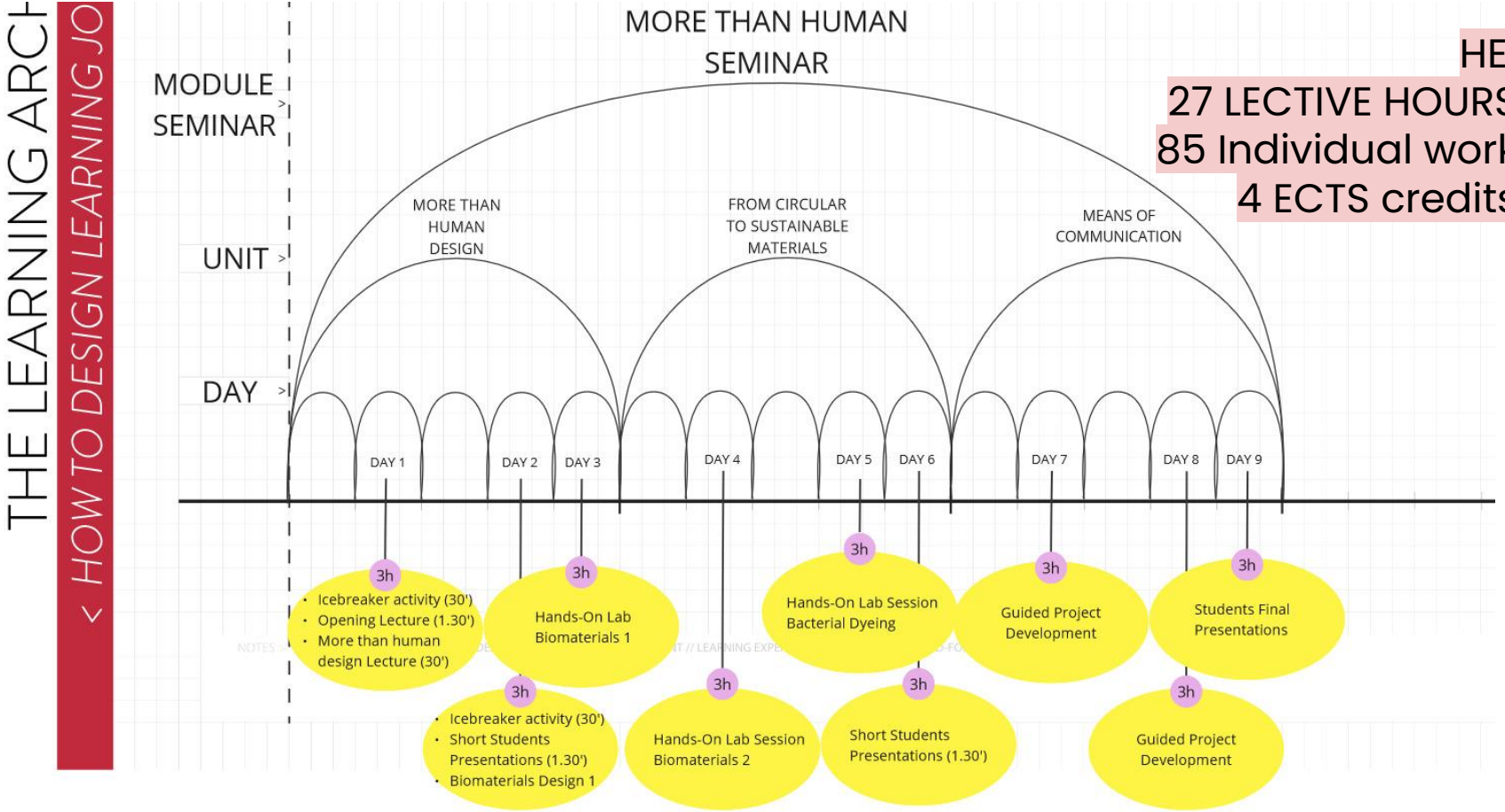
More **T**han **H**uman Design

Anastasia Pistofidou
Elisava Research



HEI
27 LECTIVE HOURS
85 Individual work
4 ECTS credits

Learning Outcomes

- Acquire an overall understanding of **More than Human** perspectives currently existing in design, with concrete examples as references.
- Learn how to think and design from a More than human perspective, stepping away from Anthropocentric design perspectives by critically exploring ‘agency’.
- Grasp the potential of building a more-than-human ecosystem and how it can be implemented and cared for over time.
- Knowledge and understanding of the shift in the fashion industry towards **sustainable and circular materials**, and the ability to identify, evaluate and differentiate between various sustainable and circular materials, including their sourcing, production processes, and environmental impact.
- Critically evaluate the concept of circularity and its application in material selection and design projects, whilst assessing the suitability of materials for specific design projects, considering both functionality and environmental considerations.
- Application of Circular Design Principles: develop strategies to 'close the loop' in material use, ensuring materials retain their highest value for as long as possible.
- Explore a range of sustainable/circular materials, including local organic fibres, the concept of material bioregions, discarded textiles, agricultural waste, and bio-materials.

Assessment

- Active participation in class discussions and workshops.
- Literature Review and References of More than-human design in practice.
- A sound project proposal for a more-than-human design project, with nominated actors and goals within the project (e.g. a handwoven bag made for foraging, made from locally grown & processed nettle fibre, which promotes biodiversity and pollinators in the local area).
- Literature Review and References of From Circular to Sustainable Materials design.
- Biomaterial design and making
- Storytelling, Video and presentation of project development

Studio Brief / More **T**han **H**uman **D**esign

Accelerated technological advances are **detaching humankind** far away **from nature** that is considered an infinite resource for extraction and exploitation. Design and the urban habitat becomes more and more sterile, artificial and connected. At the same time, the depletion of biodiversity and the current pervasive human impact is bringing the ecological crisis at the forefront of discussions and demands of societal changes.
The role of design shifts from human centered to a more holistic approach and the role of the designer shifts to a facilitator that can bring the species together for co-existence.
More **T**han **H**uman **D**esign (MTHD) draws from the theories of posthumanism and from bobystorming design methods and seeks to transmit a **symbiotic design approach** that considers the **life-cycle of materials,** the **inter-species cohabitation** and the use of **natural based solutions** in design. By quick prototyping and testing and by alternating the user perspective from human to non human, students will design artifacts that demonstrate **viable aliases between species and nature**.

More **T**han **H**uman **D**esign

- Develop a non anthropocentric approach to design.
- Sustainable material driven design
- Experiment with nature based solutions to prototype solutions for inter-species associations.

Deliverables

- **Deliverable 1** >

A presentation (5-7 slides) of first ideas, references and sketches

- **Deliverable 2** >

Present the Material experimentation and prototypes

- **Deliverable 3** > Final presentations

Presentation of the final idea, final products, artifacts and prototypes.

Small video of story. Material Samples

More Than Human Design

The current era of the **anthropocene**

The Anthropocene Epoch is an unofficial unit of geologic time, used to describe the most recent period in Earth's history when human activity started to have a significant impact on the planet's climate and ecosystems.

The word combines the root "anthropo", meaning "human" with the root "-cene", the standard suffix for "epoch" in geologic time.

The Anthropocene is distinguished as a new period either after or within the Holocene, the current epoch, which began approximately 10,000 years ago (about 8000 BC) with the end of the last glacial period

More Than Human Design

Concepts about the **Symbiocene**

Glenn Albrecht: "The next era in human history should be The Symbiocene (from the Greek symbiosis, or companionship.

PRINCIPLES :

- the full elimination of toxic-to-life substances;
- the complete and safe biodegradability of all materials in human use
- the exploitation of non-polluting forms of safe, renewable energy.
- priority use of the renewable resources of locality and regions;
- respect for the shared life or biocomunen of all holobionts and the creation, protection and repair (if necessary) of the symbiotic bonds between species at all scales.

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Concept of companion species from **Donna Haraway**

Observe and learn how other species co-evolved and co-shaped each other's histories, behaviors, and cultures. Describe examples of mutual influence between species.
How can we have a more ethically responsible and respectful approach towards other species?
How do other species shape our identity ?

How can design propagate interspecies understanding?

Who is in power, control, and exploitation ?

Can we challenge traditional hierarchies?

Explore The concept of companion
Against the concept of pet

Have animals and humans been considered equally in the design process? What methods can be used to overcome the species gap in designing for nonhuman species? How is this different from designing solely for people?

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More **T**han **H**uman Design

DICTIONARY

1. Posthumanism
2. Postnature
3. Anthropocene
4. Simbiocene
5. Planetary uncertainty
6. Object oriented ontology
7. Distribute agency across human, natural environment (natural systems, ecosystems) and machines
8. Biomimicry
9. Symbiotic entanglement
10. Mediating agents
11. Xeno-surrealism : favoring intimate relationships between strangers
12. Simpoeitic multitudes
13. Symbiotic associations
14. Multi-species design
15. Transplanetary Habitats
16. Speculative Design
17. Companion Species
18. Design for non human
19. More than human design

All life is interconnected and interdependent.
We build and sustain good relations between human and nonhuman animals, plants, elements, and forces of the Earth.

Observe the, the form, biological needs, and movement patterns

Dr. Anne Galloway, http://www.morethanhumanlab.nz/

Digital & **Biological** Fabrication Associations

Scaffolds for nature
Human learning , monitoring

Design Observe Test

Digital & **Biological** Fabrication

Silk **P**avilion

MIT Media Lab in collaboration with Prof. Fiorenzo Omenetto (TUFTS University) and Dr. James Weaver (WYSS Institute, Harvard University).
The Silk Pavilion explores the relationship between **digital and biological fabrication** on product and architectural scales.

What are sustainable and humane methods for harvesting, spinning and weaving silk-based products and structures? How can humans collaborate with other species to create new materials and structures without depleting natural resources?

Digital & **Biological** Fabrication

Bioknit, Hub for Biotechnology and the Built Environment

Mycocrete, a paste made with fungi, can be combined with a knitted textile framework to create environmentally friendly constructions, an example of **digital and biological fabrication** on product and architectural scales.

Designing habitats for other species

Wildlife Conservation, Habitat Restoration, Wetland Restoration ,Wildlife Corridors, Urban Wildlife , Pollinator Gardens, Marine Habitats , Zoos and Aquariums

Design Observe Test

Designing habitats for other species

Aki-Inomata, **Why Not Hand Over a “Shelter” to Hermit Crabs?**

Her work addresses identity and displacement, and questions societal boundaries between humans versus animals and the natural versus man-made world.

https://www.aki-inomata.com/works/hermit/

https://www.aki-inomata.com/works/kiku-ishi/

Designing habitats for other species

Symbiotic Spaces

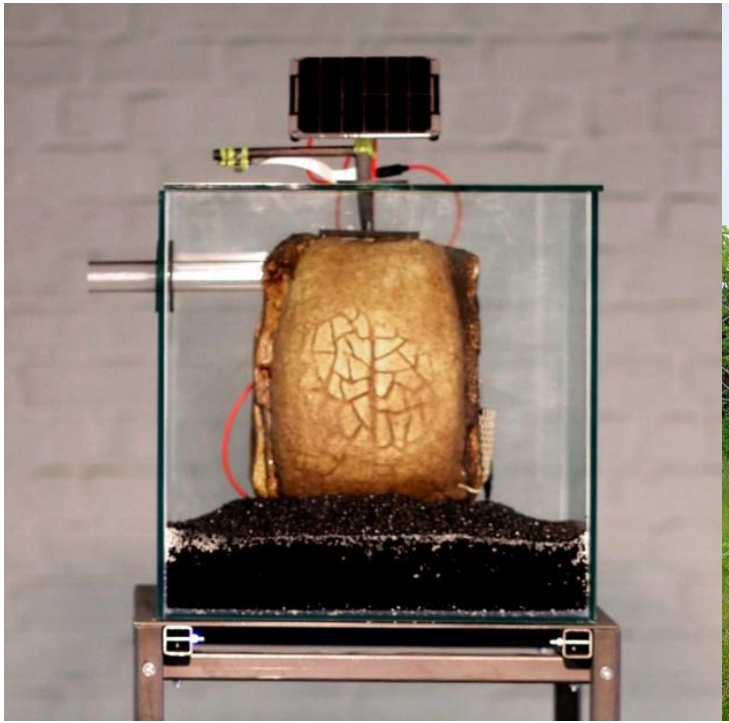
The machine is us, an aspect of our embodiment“ writes Donna Haraway in her Cyborg Manifesto from 1985 and thinks technology as part of the natural human process and also humans as part of nature. Symbiotic Spaces is involving Robots and local, wild clays to search for a bio-friendly way of building and to integrate digital manufacturing into the current paradigm shift in arts and design.

https://symbioticspaces.net/

Designing habitats for other species

Annemie Mas, Intelligent Guerrilla Beehive

Safe refuge for city honeybees, and simultaneously a biosensor that interacts with the environment and measures the pollution of the foraging fields around the beehive.



https://annemariemaes.net/projects/the-intelligent-guerilla-beehive/

Multi Species coexistence

“becoming other together” through sympoiesis

Ram Shergill, Posthuman Bodying, https://www.moca.london/ramshergill.html

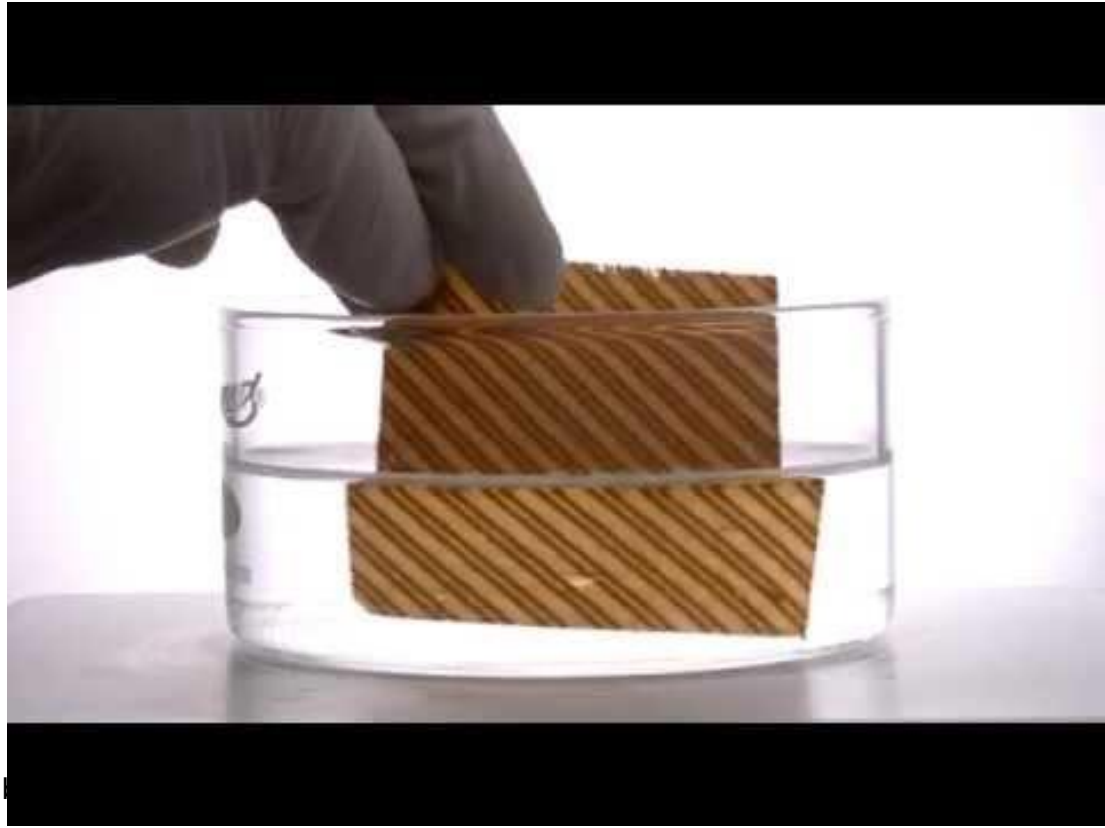
Multi Species coexistence

Domingo Club, Fermenter Necklace

https://domingoclub.com/shop/fermenter-necklace

Nature as technology

Programmable Wood, Self Assembly lab, MIT

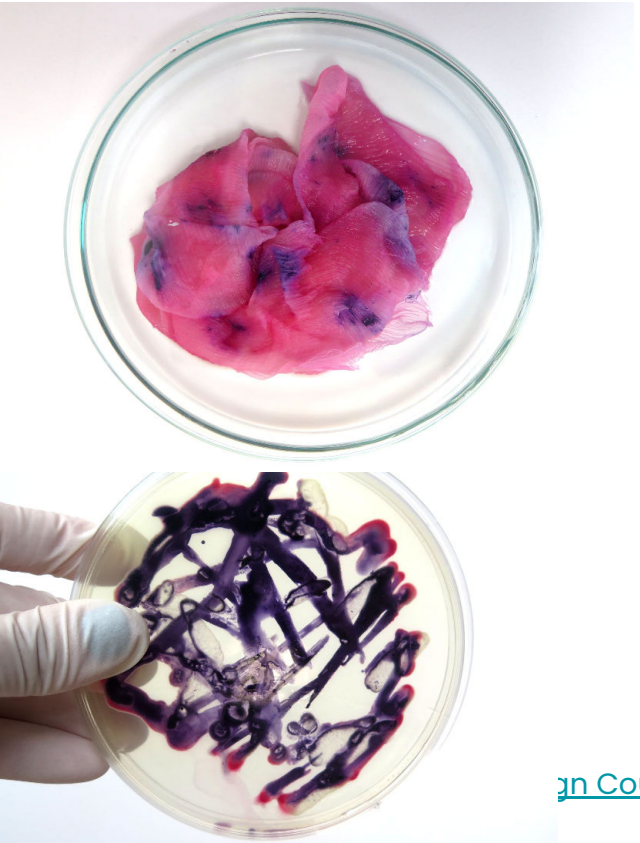


Nature as technology

Piel Vivo, Iaac

Engineered Living Materials

Textile Bacterial Dyeing, FabTextiles, Fabricademy 2019-current



Engineered Living Materials

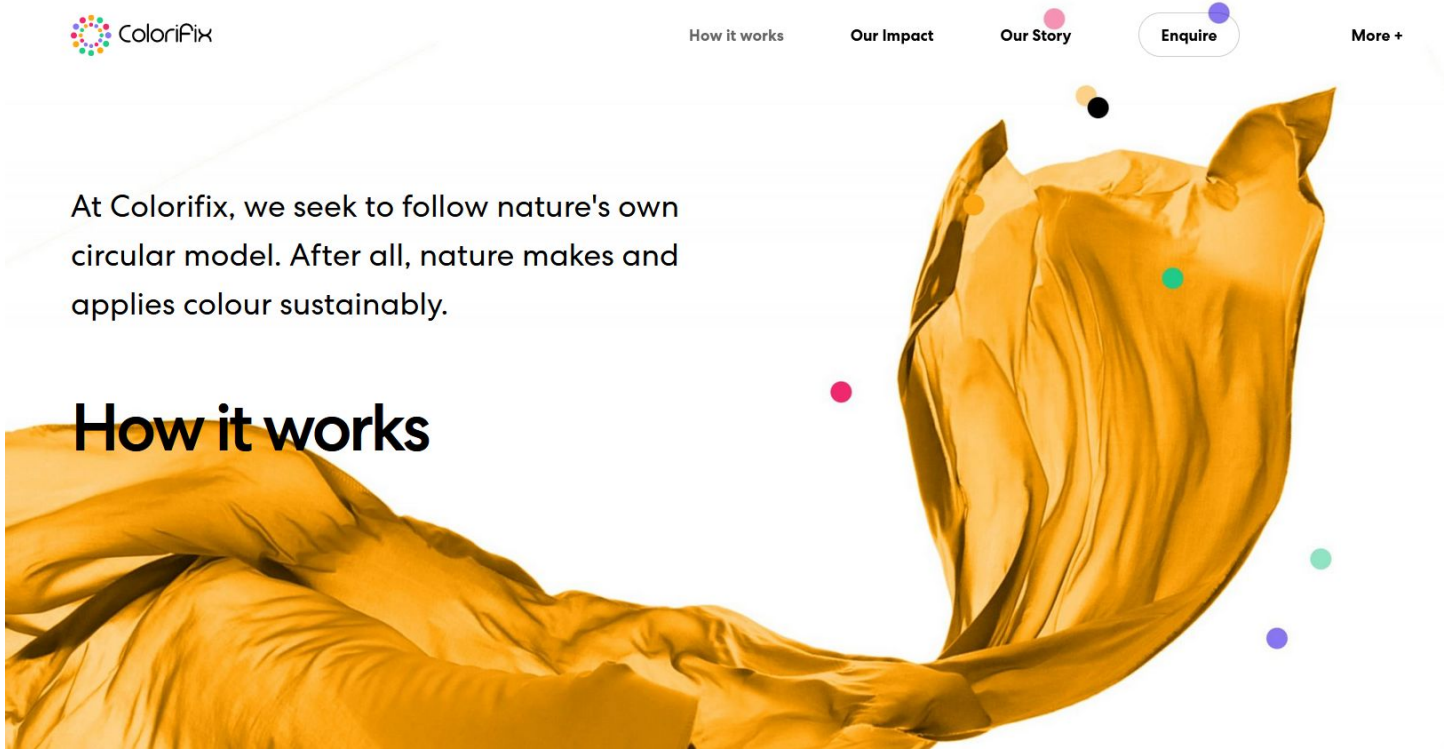
Textile Bacterial Dyeing, FabTextiles, Fabricademy 2019-current





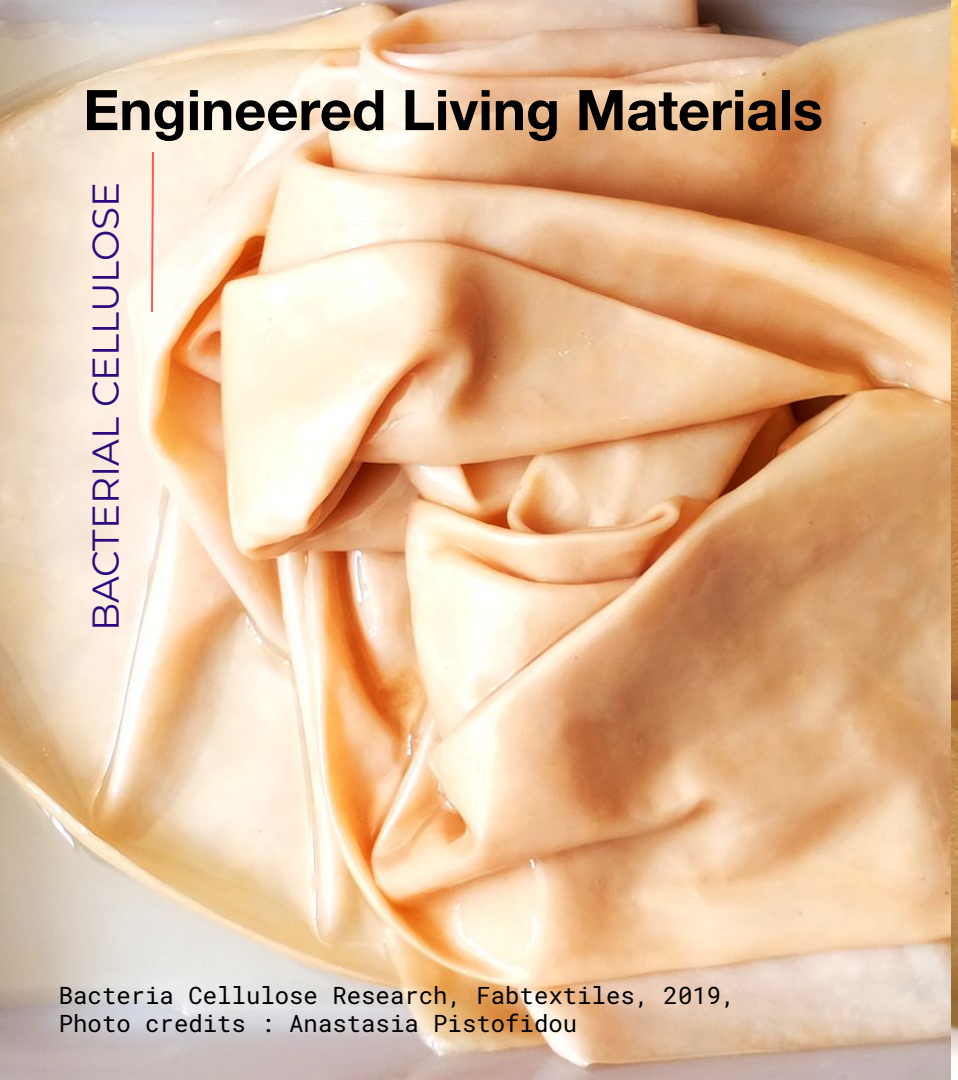

Engineered Living Materials

Textile Bacterial Dyeing, COLORIFIX

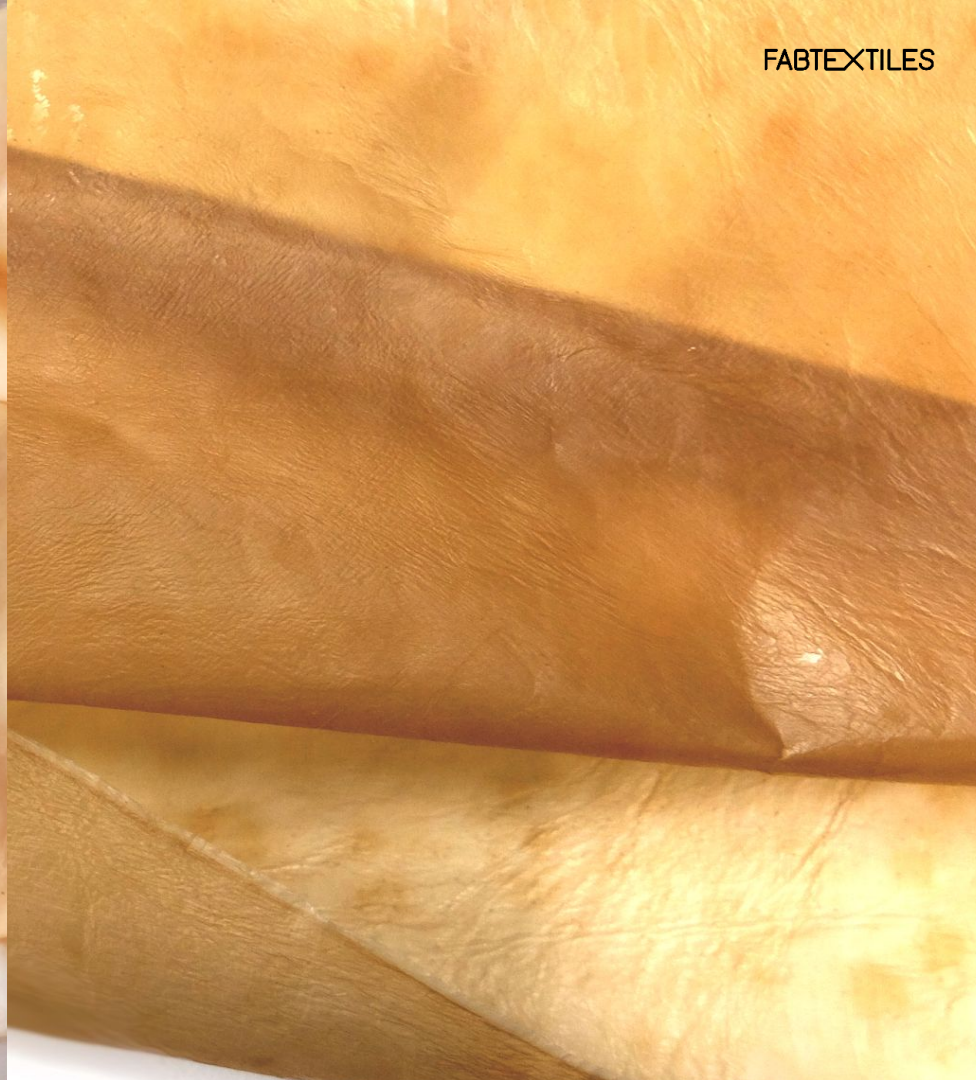


Engineered Living Materials

BACTERIAL CELLULOSE



Bacteria Cellulose Research, Fabtextiles, 2019,
Photo credits : Anastasia Pistofidou



FABTEXTILES

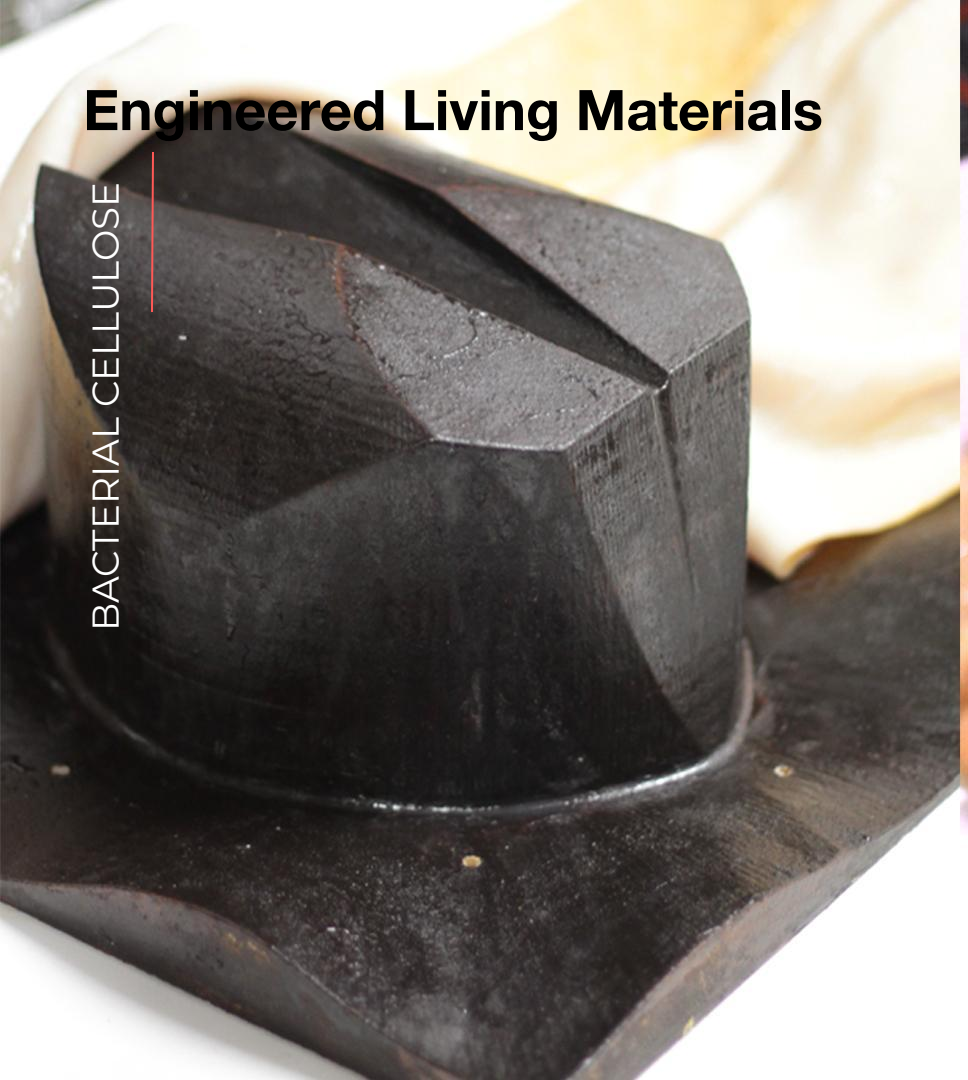
Engineered Living Materials

BACTERIAL CELLULOSE

FabTextiles 2016, kombucha bacteria leather - biocouture

Engineered Living Materials

BACTERIAL CELLULOSE



FABTEXTILES

Engineered Living Materials

BACTERIAL CELLULOSE

Kombucha Hat, Betiana Pavon, Fabricademy BCN 2018

Laser cut Kombucha Bag, Catherine Euale, Fabricademy BCN 2018

Design for Bioremediation

A biomaterial for fashion that can remediate the soil

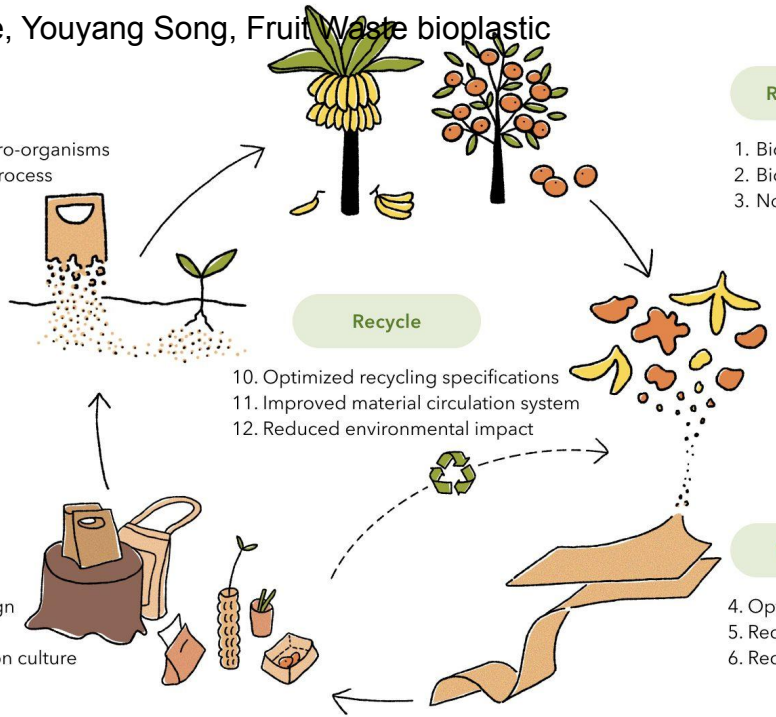
Yongfan Lu, SOIL•BIORI•ASHION

Design for Bioremediation

PeelSphere, Youyang Song, Fruit Waste bioplastic

Design for Bioremediation

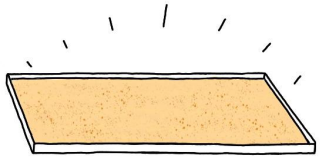
PeelSphere, Youyang Song, Fruit Waste bioplastic



MIX The fruit wastes are mixed and ground into fine pieces

BLEND They are further blended with bio-binder into a mixture

FORM The mixture then forms sheets of materials



Embodying the Non•Human

Thomas Thwaites, Goatman

https://www.thomasthwaites.com/a-holiday-from-being-human-goatman/

“Looking at the world from other species’ points of view is a cure for the disease of human self- importance.“
Pollan, M. 2007

Embodying the Non•Human

Equine Eyes, Alan Hook

Equine Eyes is a set of wearable and usable headsets which test approaches to form inter-species connections with horses. The headsets simulate horse vision by taking in two live camera feeds, filtering them and rendering them to display in an immersive headset for the human-animal’s binocular stereoscopic eyesight.

https://www.equineeyes.co.uk/

Embodying the Non•Human

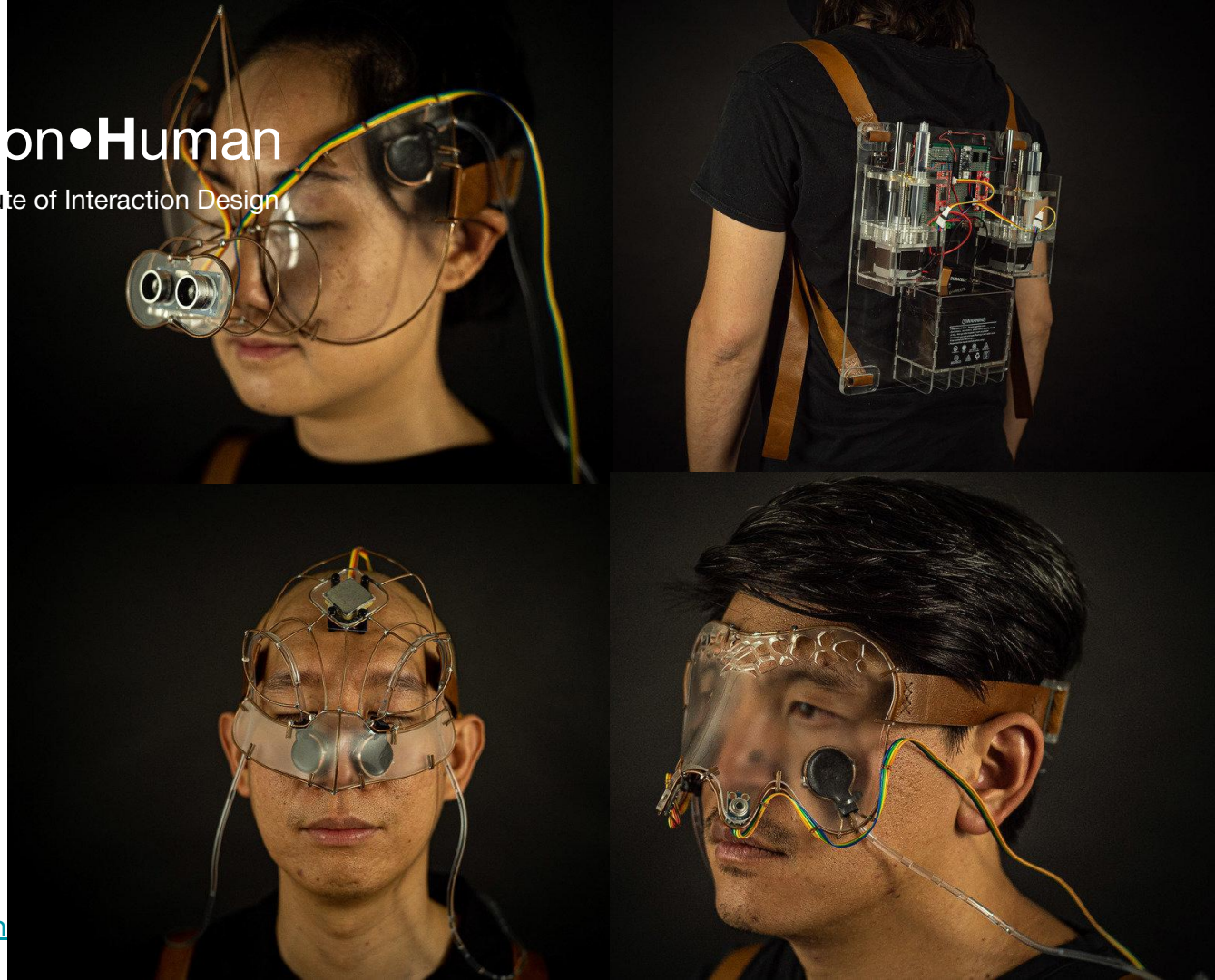
Jose Chavarría, Copenhagen Institute of Interaction Design

Echolocation: Inspired by bats, this mask simulates the feeling of bouncing sound waves, making i t possible to feel if there's anything in front of you and how far away it is.

Infrared Sensing: Inspired by pythons, this mask enables you to feel the infrared emissions of external bodies, allowing you to sense if other nearby creatures are alive or not.

GeoMagnetoception: Inspired by sea turtles, this mask can make the user feel the different latitude and longitude coordinates in the world, allowing humans not only to know where they are in the world, but to feel it.

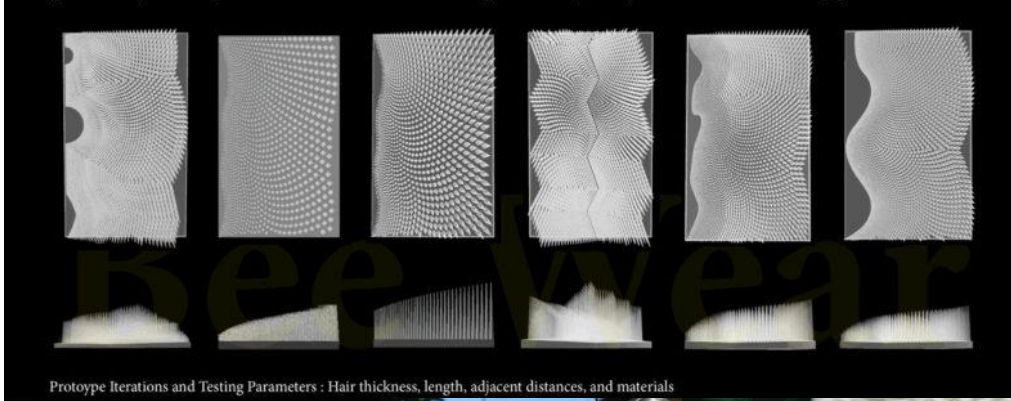
More than Human Design



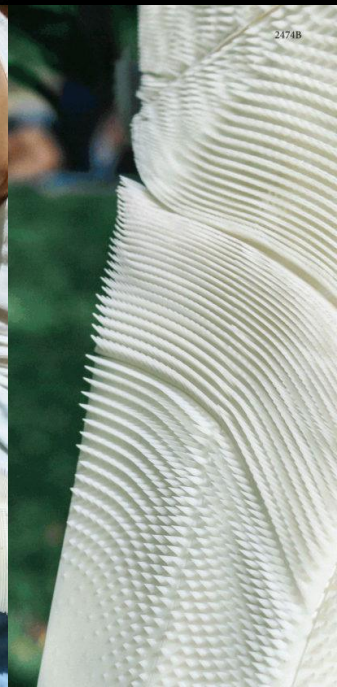
Embodying the Non•**H**uman

BeeWear, Abhishek Soman, IaaC, 2019

The concept of ‘BeeWear’ reflects its purpose concerning the pollination backdrop, drawing parallels between humans and bee navigation and travel behavior. The methodology is composed of studying bee morphology, a series of design iterations based on natural interaction and scale optimization, functionality, geometries, fabrication processes, and supplemental fashion aesthetics. It caters to a holistic design aid, bridging the gap and re-establishing the link between humans and other species, by playing a proactive role in responding – actively and passively – towards the environment, refurbishing individual and social awareness and finally rethinking about the envelope of wearables.



Protoype Iterations and Testing Parameters : Hair thickness, length, adjacent distances, and materials



DELIVERABLE 1 >

- Select 2 words from the DICTIONARY, read about them and write 1 page for each (150-200 words), adding the references (links that you researched) (2 slides, one per each word)
- Add 2 more words that you believe are relevant. read about them and write 1 page for each (150-200 words), adding the references (links that you researched) (2 slides, one per each word)
- 1 slide with desktop research conducted about the topic of More than Human , adding an interesting quote from a book or interview, statistics, facts.
- Select the category of More than Human you want to work with.
- Create 1 slide with the category and the idea you have to work with, give a name to the project and 4-5 lines of description of what it is about
- 2 slides adding 3-4 other projects that serve as references relevant to the topic of your choice and explaining how they manifest the concept and the category you chose.
- 3-5 slide with first ideas and sketches about the project proposal they would like to develop

More **T**han **H**uman Design

Here you can find the categories of **M**ore **T**han **H**uman Design
Choose the one that is more interesting for you and start researching about it

- Digital and Biological Fabrication
- Designing habitats for other species
- Multi Species coexistence
- Nature as technology
- Engineered Living Materials
- Design for Bioremediation
- Embodying the non human


Interested in bringing the training to your Institution?
Contact me at > apistofidou@elisava.net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