



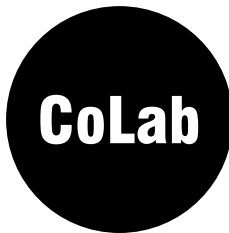
**CoLab**

**CRUSH UP**

Prototypes made of waste

SS21 | FG Borrego

Collaborative Design Laboratory  
Architekturdarstellung und Gestaltung



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# We are

**CoLab is a collaborative design laboratory** whose aim is to examine certain interfaces that exist between design strategies and design processes in contemporary industry in order to apply a model - based on collective work in design practice and architectural representation.

Between designers and the manufacturing trades there is still a lack of communication and interaction. In order to bridge this gap and to promote good cooperation, design practice, architectural representation and production processes are included in projects, the success of which is based on working together.

**CoLab Berlin** is part of a larger network that also includes a team in Madrid where it was founded in 2009. CoLab Berlin is based in the department of architectural representation and design at TU Berlin.

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# Crush Up

## RECYCLING OUR OWN WASTE\_ INTRODUCTION

We live in a dramatic environmental situation where climatic change and abuse of natural resources is overtaking all future agendas.

The building industry is responsible for a relevant contribution to the CO2 emissions and any sustainable initiative has become a necessity.

We should not produce waste and we need a new approach to our resources. Waste has to become our new material. We are in the time of recycled materials and renewable energies. How can we build with our own waste?

This necessity of reducing our waste is a process that needs technical solutions and general consciousness, so we should focus both on the scientific research to make it feasible and at the same time communicating this necessity to the society to be able to accelerate the change of paradigm.

In this context any teaching experience where students face a real construction is an opportunity, and at the same time a responsibility, to introduce these sustainable requirements and make them part as a manifesto to complement the learning contents of the experience.

We would like to research on the potential of building with the waste produced in our own faculty, taking advantage of the new digital fabrication tools.





photography: "models in dialogue" - Denys Lasdun - 1967

# Task

This seminar is the first step for the construction of a pavilion constructed out of our own waste scheduled for the End of the Year Exhibition 2022 (IfA Jahresausstellung 2022) at our Institute for Architecture.

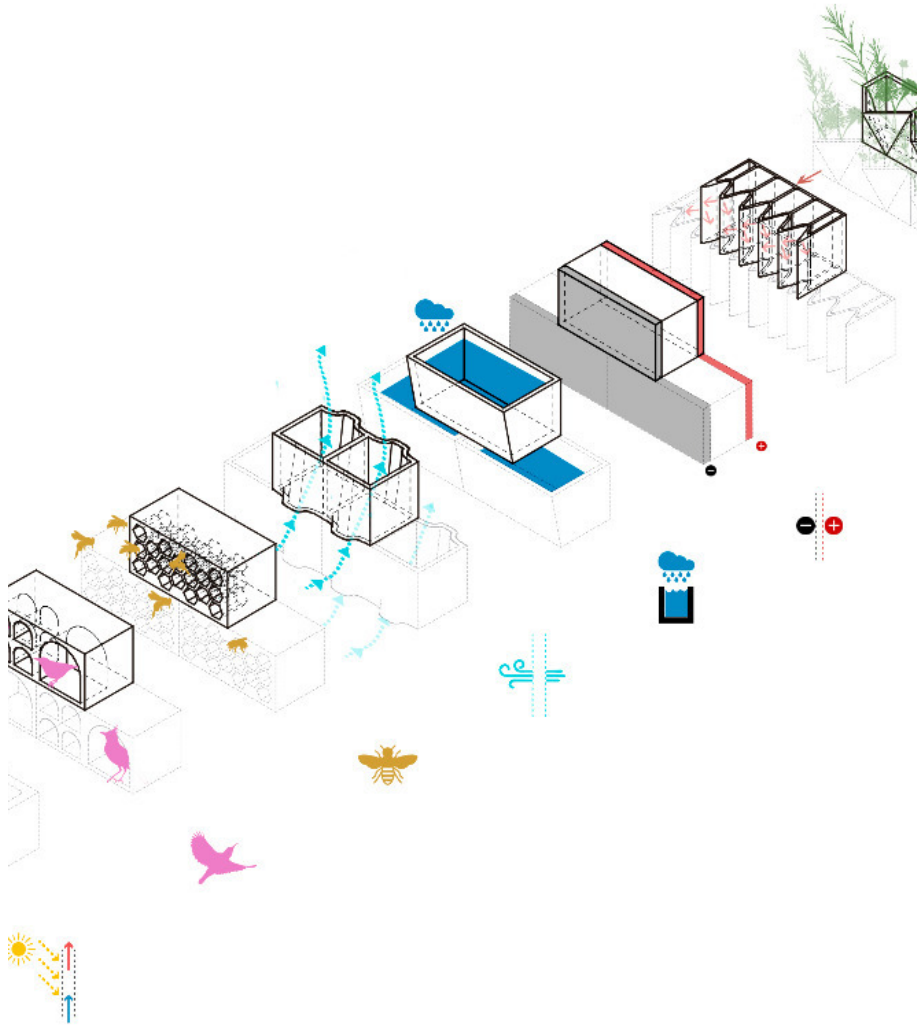
The site of the pavilion is freely selectable but it is expected to be in a visible place such as the main access in front of the building, in the foyer or in the courtyard.

The function of the Pavilion is free as long as it is partly or completely related to the IfA Jahresausstellung 2022. The pavilion should offer besides a functional environment, an added value from the thermodynamic point of view. It is expected that the construction lasts at least the whole event (2-3 days), and will consider the weather of that time of the year in case it is located outside.

This goal will be a collective enterprise where we will work in groups and we will share our progress and discoveries with forthcoming students in the upcomingv semesters.

In this first approach we have two main research lines: on the one hand we will research on the recycling and production technology and process of building with the waste of our institute, and on the second hand we will work on the design of a pavilion using this technology.







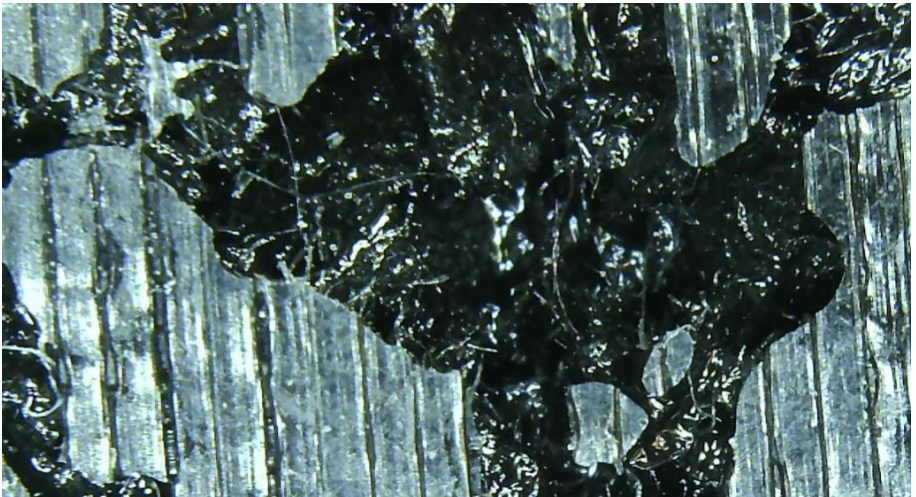
# Structure

## HORIZONTAL COORDINATION

The number of members in each group will be between 3 and 5 depending on the total amount of participants of the course. It is expected to share the acquired knowledge horizontally across all groups. For that reason we will give the responsibility of one aspect to each student of the group that will be responsible for that expertise and its coordination with other groups.

- Coordinator for up-cycling process
- Coordinator for digital fabrication and software
- Coordinator for energy
- Coordinator for mechanical structure
- Coordinator for construction

This responsibility will consist only in the coordination but the tasks will be developed collectively by the whole group.

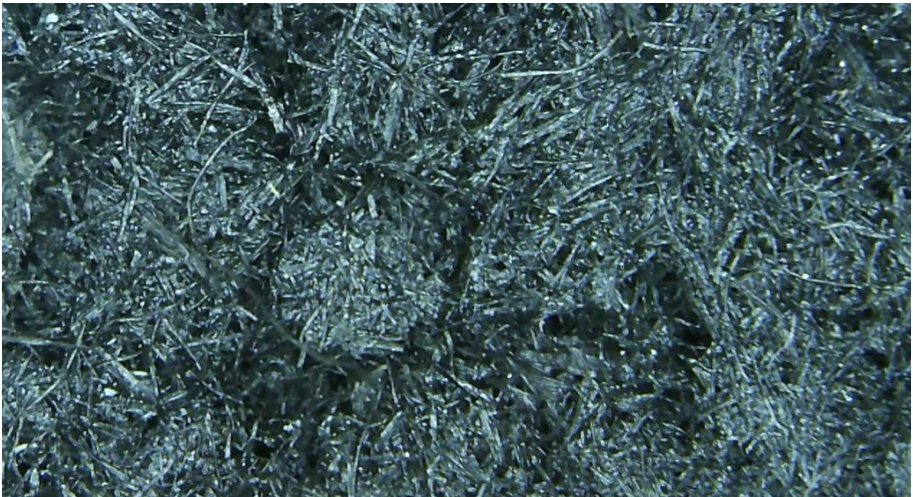




## DELIVERABLES

Each group will design a project for a pavilion for the IfA Jahresausstellung 2022 and will produce the following results:

- Prototype: 1 component the pavillon is constructed out of (1:1)
- Prototype: 1 joint that connects these components (1:1)
- Plans of the whole Pavilion (1:50)
- Axonometries of the Pavilion (1:50)
- Diagrams of use and construction
- Interior and exterior visualization
- Plans of the construction details (1:1/1:5)
- Axonometries of the construction details (1:1/1:5)
- Diagrams of recycling process
- Explanation text of the Pavilion design
- Explanation text of the Recycling process



# Calendar

	DATE	INFO
	Wednesday (online) 11:00 -13:30	
KW 15	<b>14.04.21</b> Hello!	first meeting / short introduction / organization of the groups
KW 16	<b>21.04.21</b> Introduction	introduction of “Crush Up”
KW 17	<b>28.04.21</b> Brain Storming	<b>3 proposals per group</b>
KW 18	<b>05.05.21</b> Supervision	group supervision
KW 19	<b>12.05.21</b> Supervision	group supervision
KW 20	<b>19.05.21</b> <b>Mid-Term Deadline</b>	<b>first prototypes + first drawings</b>
KW 21	<b>26.05.21</b> Supervision	group supervision
KW 22	<b>02.06.21</b> Supervision	group supervision
KW 23	<b>09.06.21</b> Supervision	group supervision
KW 24	<b>16.06.21</b> Supervision	group supervision



	DATE	INFO
	Wednesday (online) 11:00 -13:30	
KW 25	<b>23.06.21</b> <b>Final Deadline</b>	<b>submission of final documents in digital form</b>
KW 26	<b>30.06.21</b> <b>Final Presentation</b>	<b>presentation of prototypes + pavillon design</b>

## MEETINGS

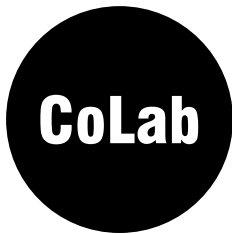
Due to the current situation meetings are held exclusively online. It is planned that workplaces are provided for students. At the moment the institute of architecture is working on a hygiene concept in order to realise that plan. As soon as there is an update to be announced we will let you know.

Meetings: Wednesdays 11:00 – 13:00 in CoLab Zoom room:

<https://tu-berlin.zoom.us/j/92884189565?pwd=cFB4UFJlRlJBbmRpc3JwNytWZmtkZz09>

ID: 92884189565

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