#fabricamp18
#fabricademy

	MONDAY 7th	TUESDAY 8th	WEDNESDAY 9th	THURSDAY 10th	FRIDAY 11th	SATURDAY 12th
9:45 - 10:00	Welcome coffee & tea	Welcome coffee & tea	Welcome coffee & tea	Welcome coffee & tea	Welcome coffee & tea	
10:00 - 10:45	**Welcome** and Introductions	**Lecture** Biofabrics & dyes	**Lecture** Computational fashion	**Workshop Demo** E-textiles and wearables	**Lecture** Ricardo Nascimento	
10:45 - 11:45	**Presentation** Fabricademy: a new textile and technology academy	**Workshop demo** Natural dyes	**Workshop demo** Grasshopper	**Lecture** Electronics / Microbit	**Teamwork** Project development	
11:45 - 12:00	Break	Break	Break	Break	Break	
12:00 - 12:30	**Lecture** Hacking open source fashion	**Lecture** Bioplastics, textile scaffold and crystalization	**Workshop demo** Grasshopper	**Lecture** Electronics / Microbit	**Workshop demo** Hands -On Soft Robotics	
12:30 - 13:30	**Lecture** Valentina, Seamly 2D open source pattern making software					
13:30 - 14:30	Lunch break	Lunch break	Lunch break	Lunch break	Lunch break	
14:30 - 15:00	**Presentation** Inspiration and modular clothing assignment	**Teamwork** Natural dyes Bioplastics Crystals	**Workshop demo** 3D printing on Fabrics 3D printing as fabrics	**Workshop demo** Crafting soft sensors	**Surprise demo**	**ARDUINO DAY! Join us at WeMake Milan !**
15:00 - 15:30	**Workshop** Design and laser cut modular reconfigurable garments				**Teamwork** Project development	
15:30 - 16:45			**Workshop demo** 3D printing graphene sensors	**Workshop demo** Working with movement		
16:45 - 17:00	Break	Break	Break	Break	Break	
17:00 - 17:15	**Team creation**	**Teamwork** Project development	**Teamwork** Project development	**Teamwork** Project development	**Final presentation**	
17:15 - 18:00	**Teamwork** Concepts for the groups					
18:00 - 18:30						
18:30 - 19:30		**Presentation** Digital Crafts. Batik between tradition and digital fabrication				

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A journey at the intersection between textiles, soft fabrication and biology

FABRICADEMY

a new textile academy

STARTING : SEPTEMBER 25, 2018

Iaac | FAB LAB BARCELONA
FABTEXTILES
waag technology & society
waag textilelab amsterdam
Academany The Academy of (almost) Anything

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Coordination

Anastasia Pistofidou

Fabtextiles
Fab Lab Barcelona
IAAC

Fiore Basile

Fabctory
Fab Connections
Academany

Cecilia Raspanti

TextileLab Amsterdam
FabLab Amsterdam
Waag

WHY?

The fashion industry is one of the most traditional and the **2nd most polluting in the world after oil**.

Today 20% of water pollution globally is caused by textile processing and consumers worldwide spent US$1.7 trillion on clothing in 2014. The production of the clothes we use is sustained over devastating social consequences in countries like Bangladesh and China, **where labour exploitation holds the low prices we love to pay in H&M, Zara and other fast fashion brands.**

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Fabricademy is a transdisciplinary course that focuses on the development of new technologies applied in the textile industry, in its broad range of applications, from the fashion industry to the upcoming wearable market

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SCOPE

Train a new generation of professionals in the textile industry, working globally for developing more sustainable processes with the help of digital fabrication, synthetic biology and knowledge networks.

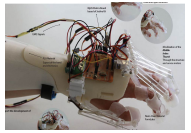
CLASSES

13 WEEKS of intensive learning

State of the Art
WEEK 1

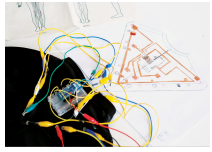
Bio Fabricating Dyes & fabrics
WEEK 4

Textile as Scaffold
WEEK 7

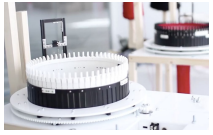


Implications and Applications
WEEK 10

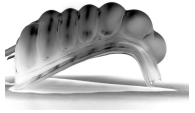
Digital Bodies
WEEK 2



E-Textiles and Wearables I
WEEK 5



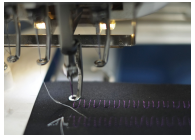
Open Source Hardware
WEEK 8



Soft Robotics
WEEK 11

Circular Open Source Fashion
WEEK 3

Computational Couture
WEEK 6

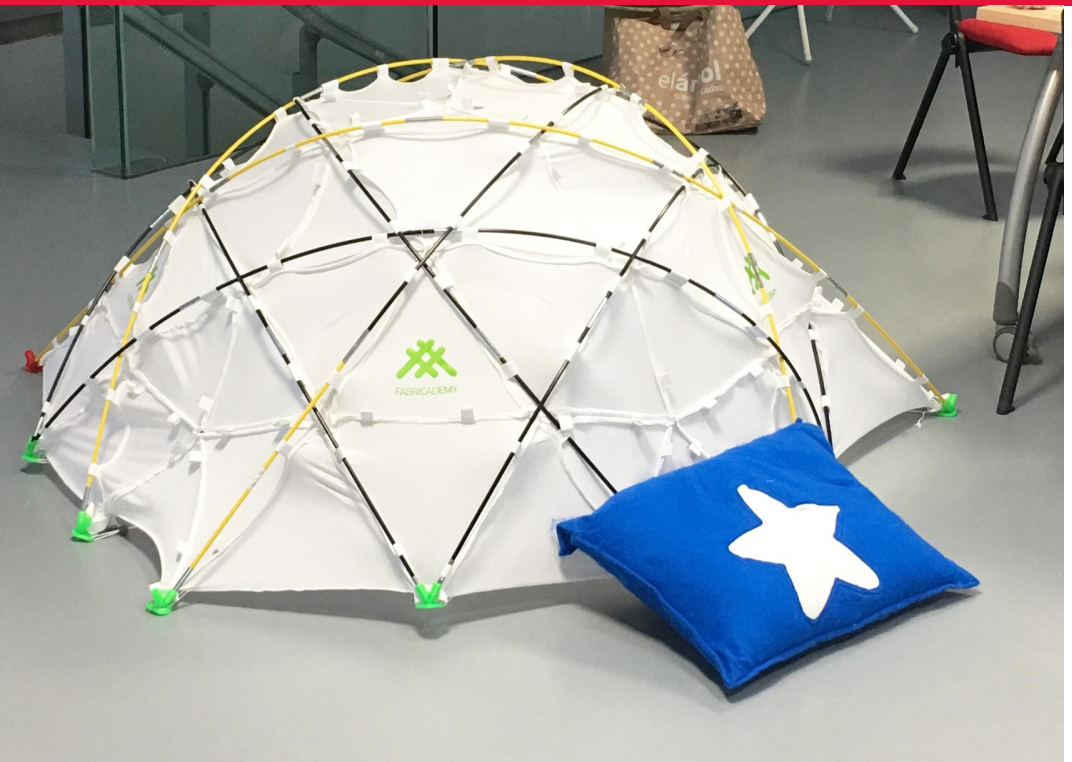


E-Textiles and Wearables II
WEEK 9

Skin Electronics
WEEK 12

PROJECT DEVELOPMENT

2,5 Months of project development



- Research , papers, literature
- Use of the lab and it's infrastructure
- Local Mentorship from local instructor
- Remote Mentorship from global instructors & faculty
- Final Project Exhibition

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FACULTY

Anastasia Pistofidou

FABTEXTILES, IAAC
FAB LAB BARCELONA

Cecilia Raspanti

TEXTILELAB AMSTERDAM
WAAG SOCIETY

Zoe Romano

WE MAKE, MILAN

Katia Vega

SOLUCIONES RACIONALES

Oscar Tomico

ELISAVA,
BARCELONA

Aldo Sollazzo

NOUMENA, RESHAPE,
IAAC BARCELONA

Mika Satomi

KOBAKANT

Dr. Lily Chambers

RHINE-WAAL UNIVERSITY

Hanna Parner Wilson

KOBAKANT

Varvara & Mar Canet

MAR CANET & VARVARA GULJAJEVA ARTIST DUO

Becky Steward

THE LEADING ZERO

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1. State of the Art

- State of the textile industry
- Course presentation
- Weekly assignments
- Project management
- Content publishing
- Documentation guidelines

Anastasia Pistofidou
Cecilia Raspanti
Fiore Basile

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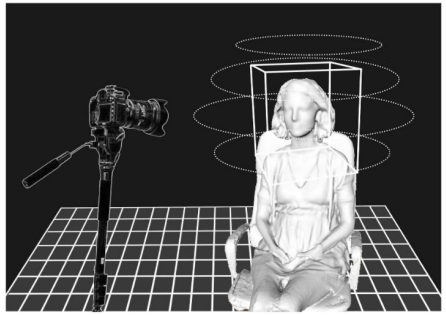
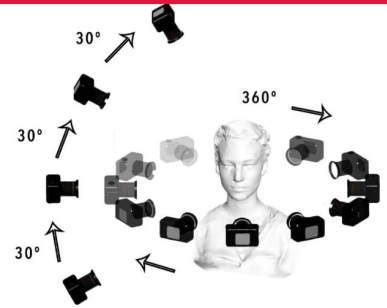
2. Digital Bodies

- The human figure
- 3D scanning bodies
- Digital to physical
- Digital fabrication techniques
- Lab safety and rules

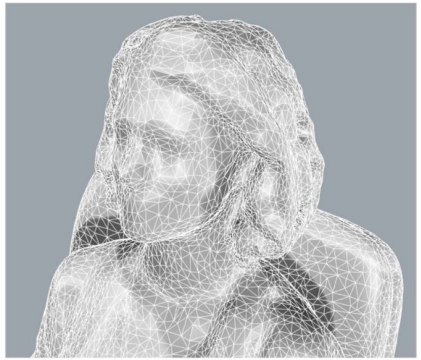
Anastasia Pistofidou

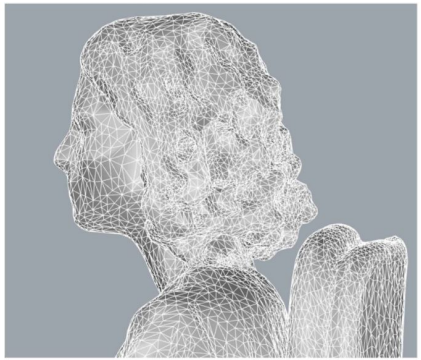
2. Digital Bodies





How to take correct pictures for the 3d scan modelling





Rhino preview of the Skanect 3d mesh

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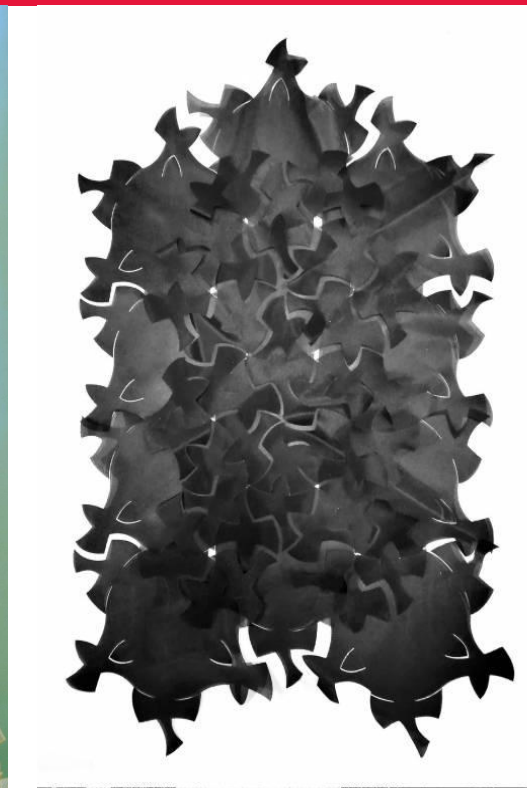
3. Circular Open Source Fashion

- Hacking the fashion system
- Circular Economy, open value chains
- 2D design and software
- Laser Cutting
- Modular patterns
- Materials and fabrics

Zoe Romano

3. Circular Open Source Fashion



https://oscircularfashion.com

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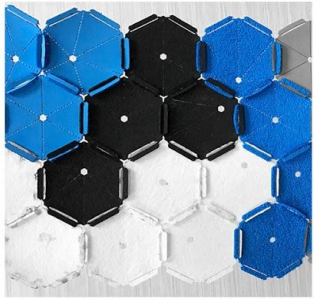
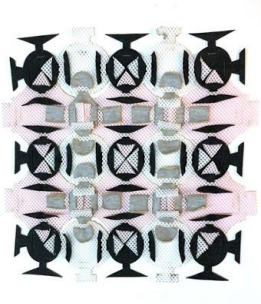
Welcome to Fabricademy Open source circular fashion catalogue

Browse, share your desings and help grow this library!





Upload & share your design

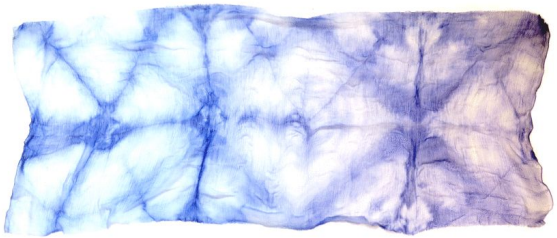
Browse all designs

4. Biofabricating dyes and materials

- The unspoken issues in the industry
- Fibers and materials
- Natural dyeing
- Bacterial dyeing
- Bio-plastics and bio-silicones
- Alternative leathers

Cecilia Raspanti

4. Biofabricating dyes and materials



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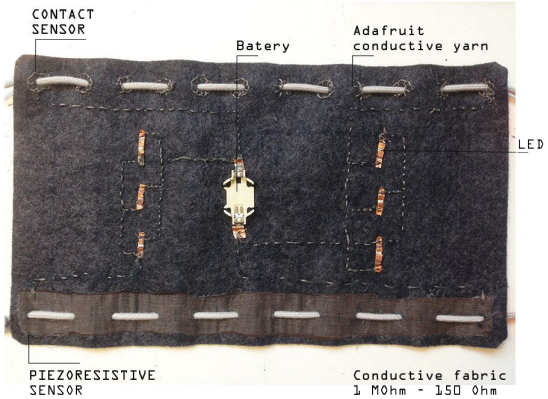
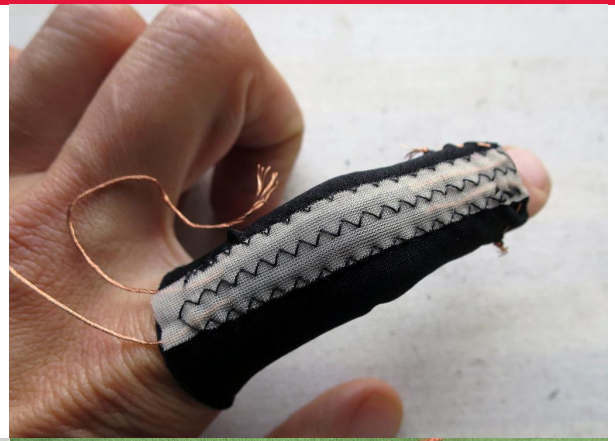
5. Textile & Wearables I

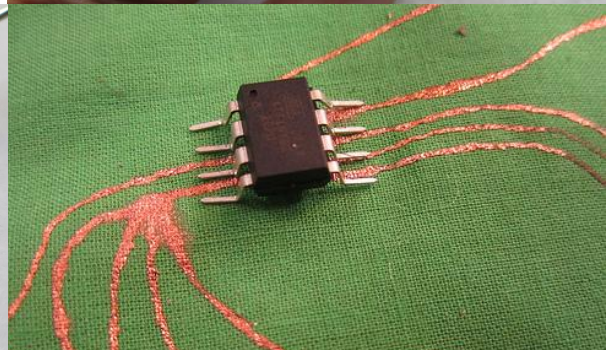
- Conductive- resistive fabrics and yarns
- DIY soft sensors
- Hard- Soft connectors
- Components
- Attiny

Hannah Perner-Wilson and Mika Satomi

5. Textile & Wearables I







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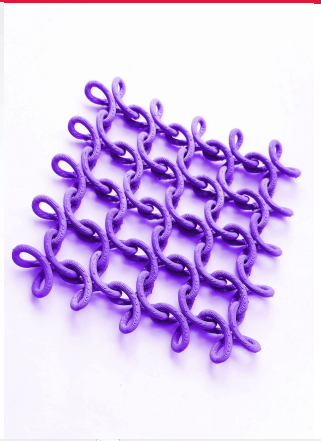
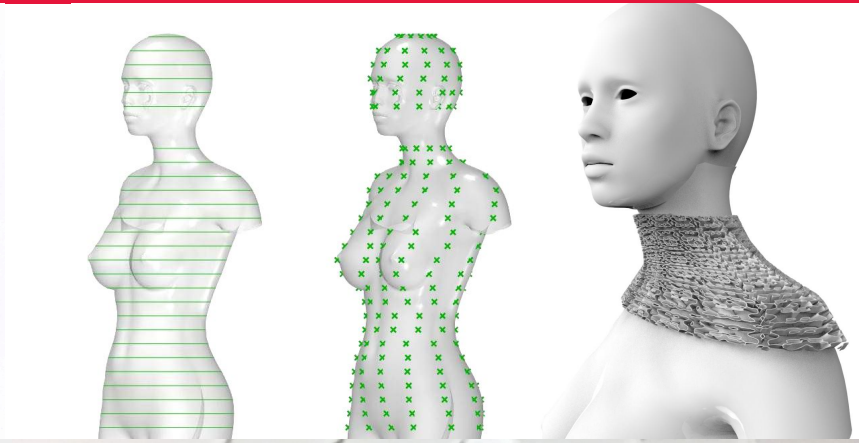
6. Computational Couture

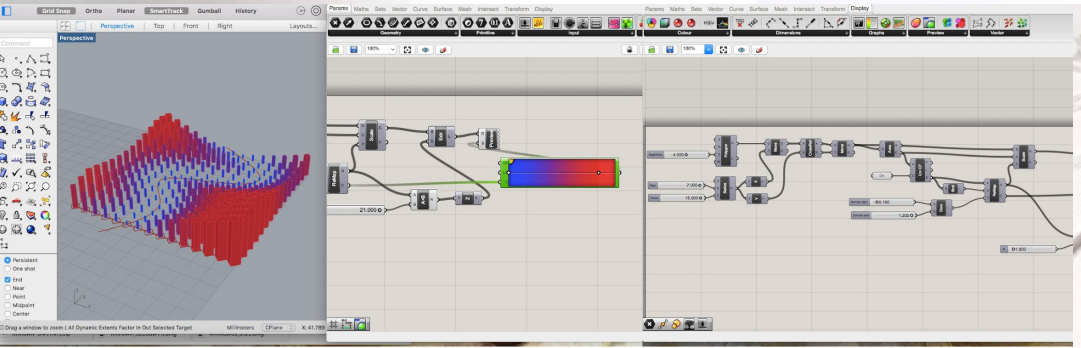
- Computation & the body
- 3D Modeling
- Parametric design
- 3D Printing techniques and materials

Aldo Sollazzo

6. Computational Couture







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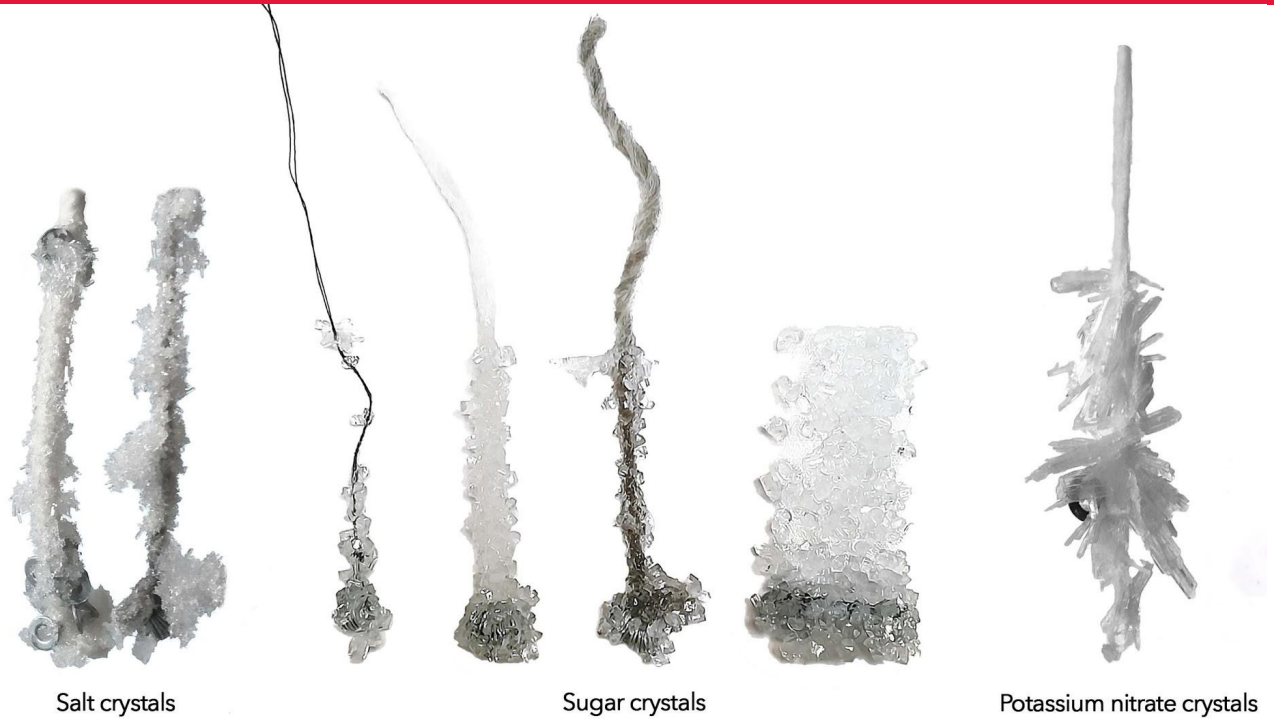
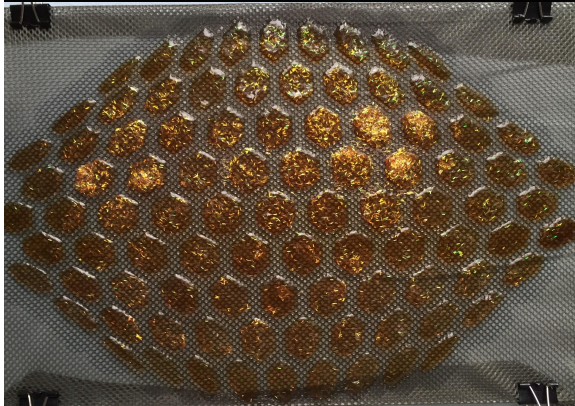
7. Textile as Scaffold

Anastasia Pistofidou

- Composites
- Crystallization
- Solidification
- Fabric formwork
- Concrete casting
- Technical Textiles

7. Textile as Scaffold





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8. Open Source Hardware

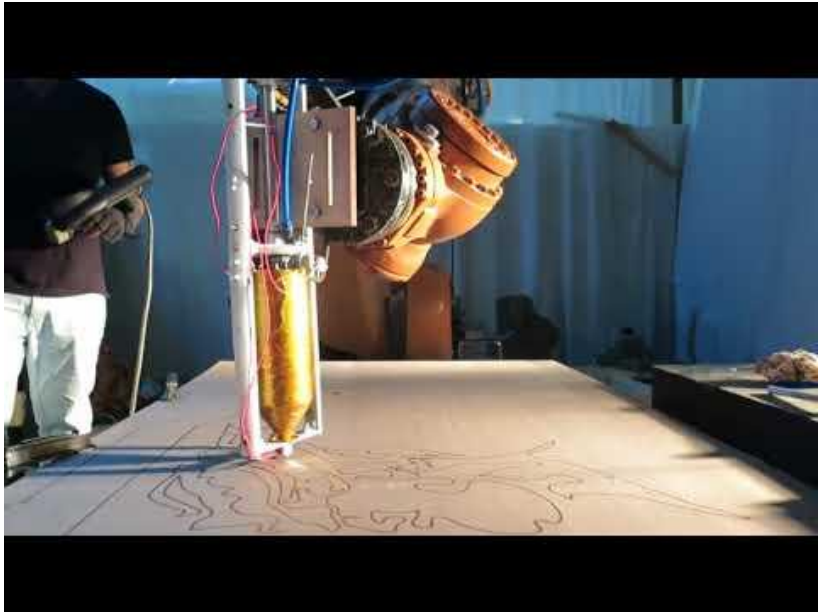
From fibers to fabric

- From fibers to fabric
- Knitting & Weaving
- Hacking machines
- Open source machines

Mar Canet and Varvara Guljajeva

8. Open Source Hardware

From fibers to fabric



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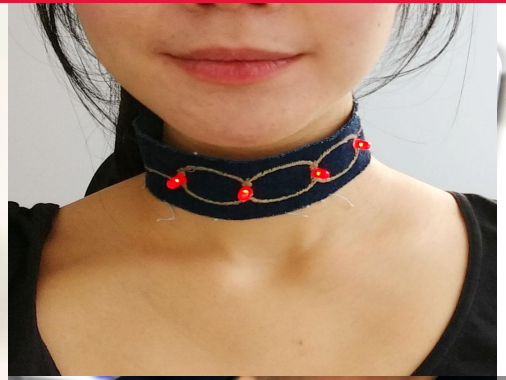
9. E-Textiles & Wearables II

Becky Steward

- Actuators
- Applications
- Microcontrollers
- Embedded electronics
- Interfaces

9. E-Textiles & Wearables II

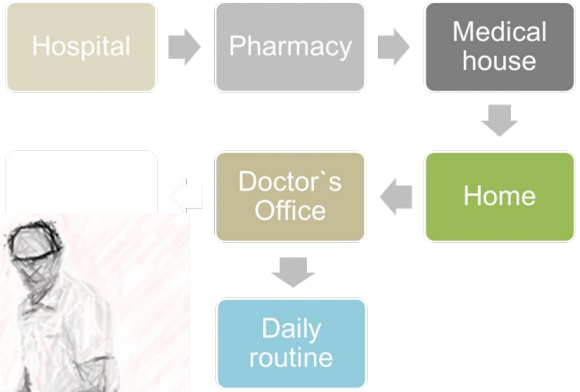


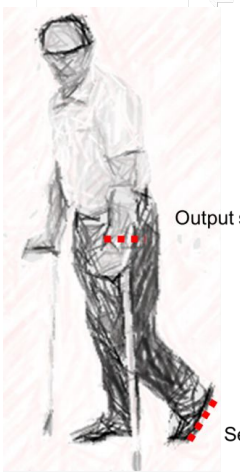
10. Implications and Applications

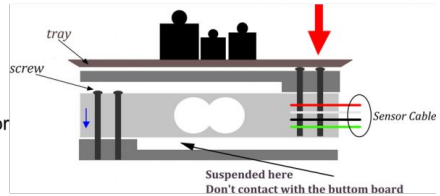
- Wearable applications
- Health & Care
- Augmented Humans
- Ultra-personalised product service systems (UPPSS)

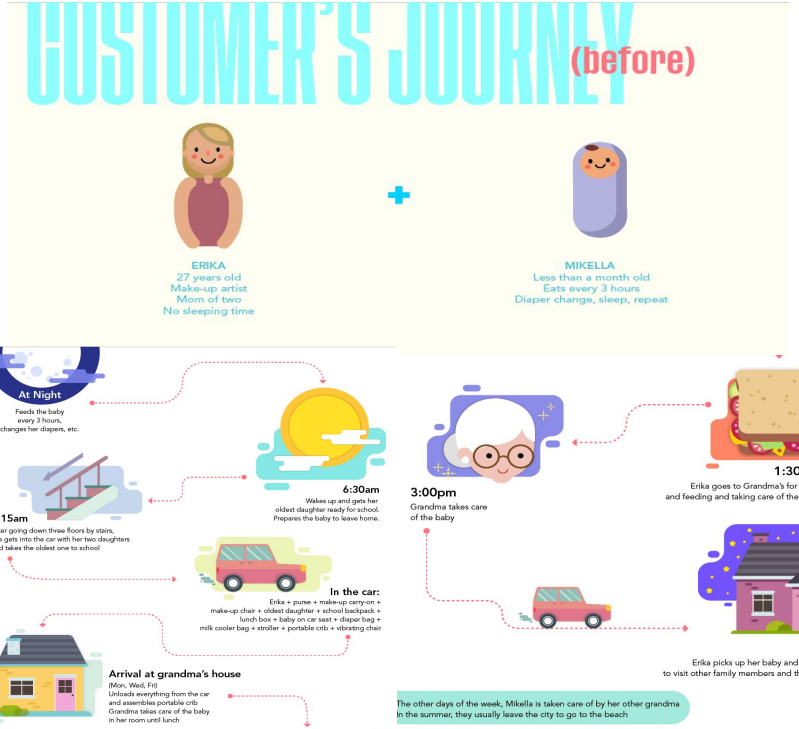
Oscar Tomico

10. Implications and Applications









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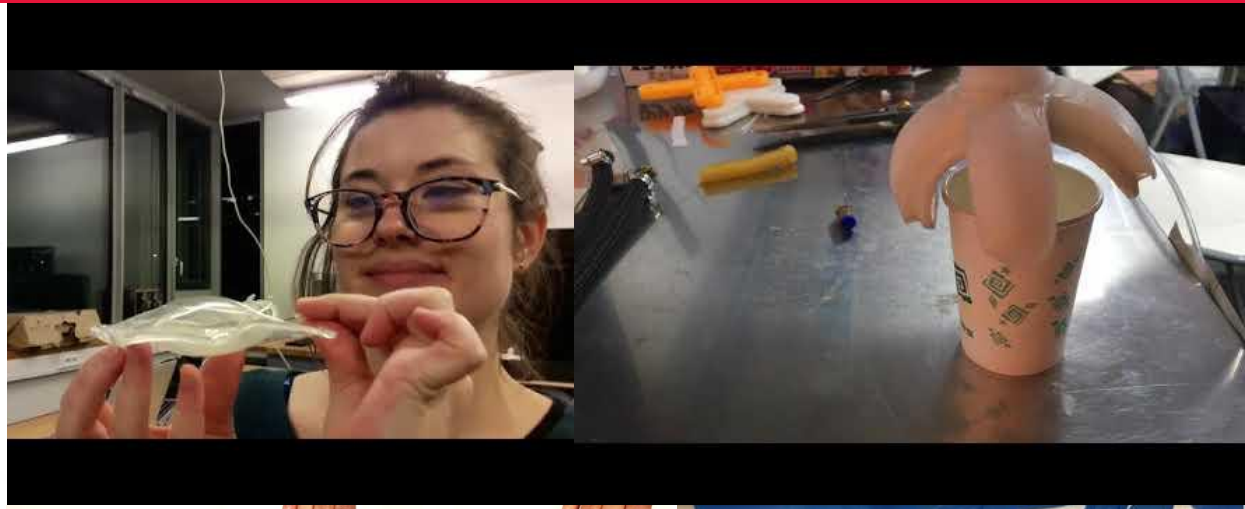
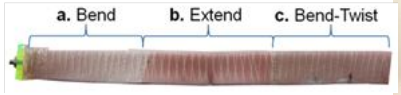
11. Soft Robotics

Lily Chambers

- Inflatables
- Molding & Casting
- Actuators
- Sensors

11. Soft Robotics



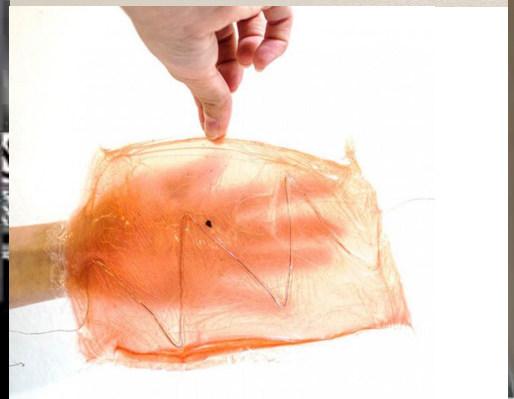


12. Skin Electronics

- Skin circuit prototyping
- Materials & Research
- Performance body extensions
- E-make-up
- Second Skin

Katia Vega

12. Skin Electronics



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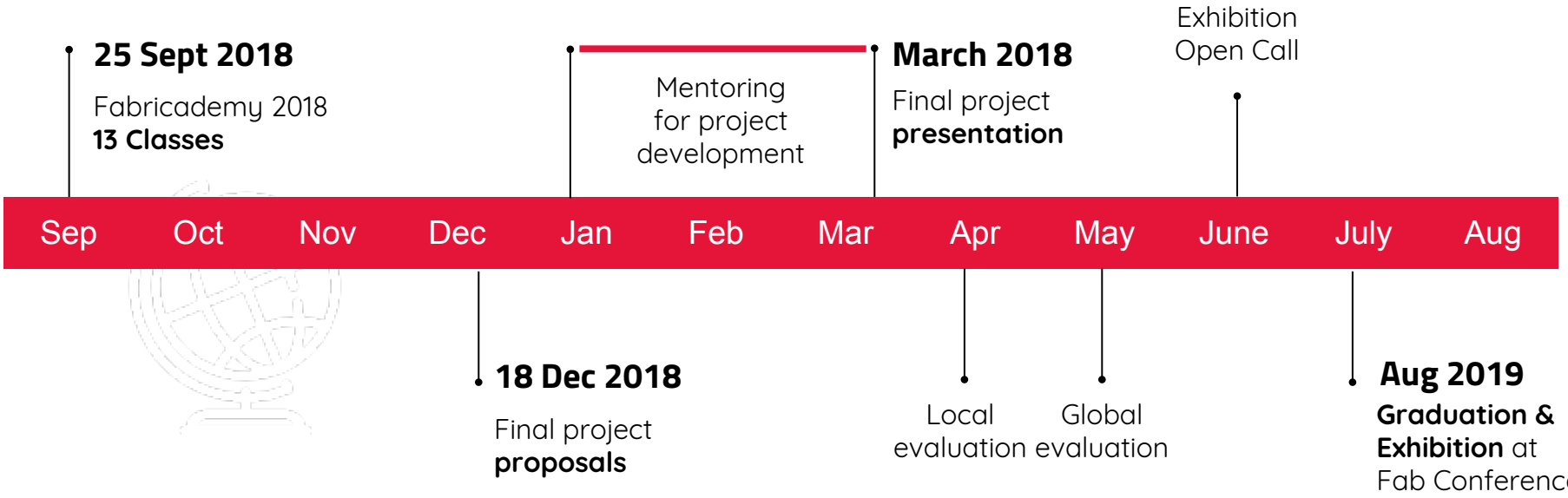
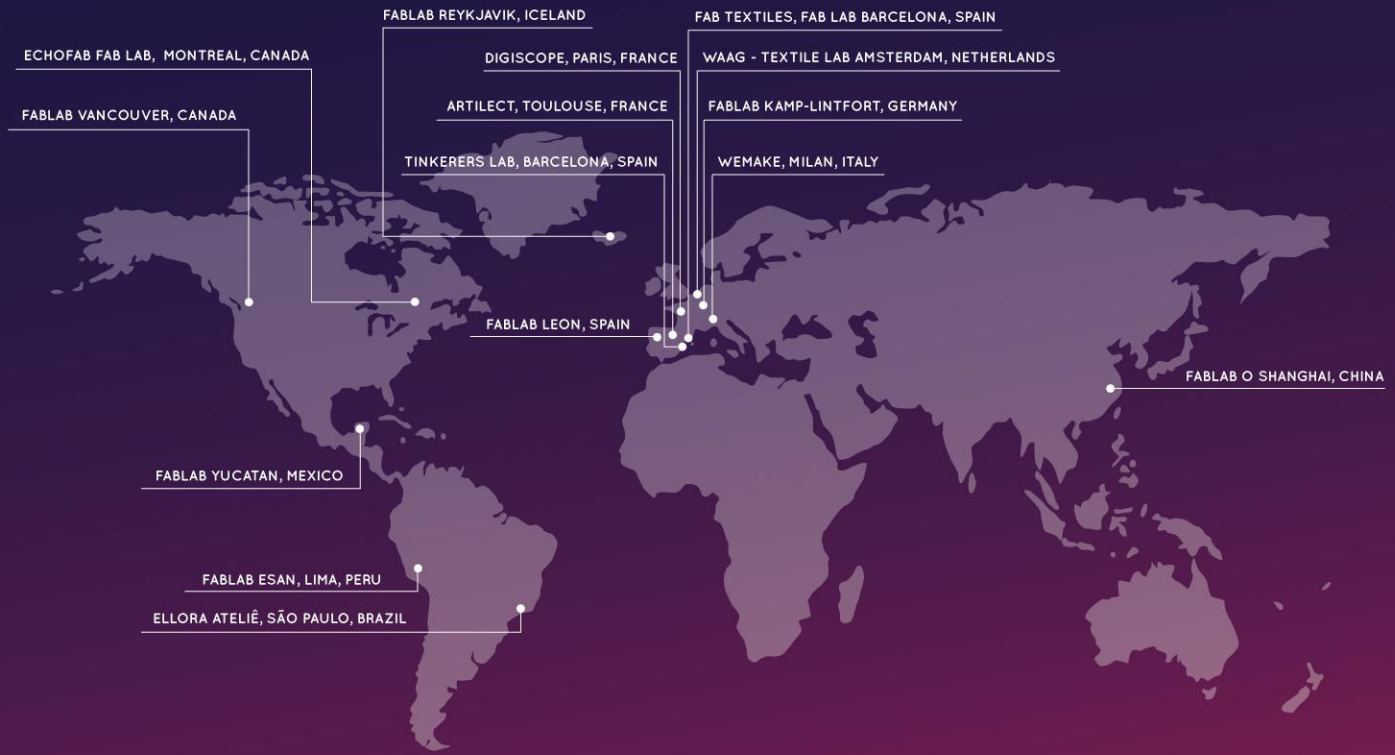
Program Overview



APPLY TO BECOME A FABRICADEMY NODE FOR 2018



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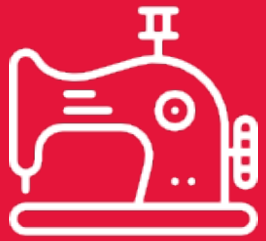
INVENTORY ADD ON

Fab academy inventory

+

Bioacademy inventory

+



Textile academy

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INVENTORY ADD ON

Bio lab

A kitchen, with water, refrigerator, pressure cooker will also work.

Materials

Sourced from the Fab Lab Inventory, from the supermarket and ebay.

Textile lab

All the necessary equipment for soft fabrication, complementing the Fab Lab Inventory.

textile-academy.org/inventory

WHO?

Fabricademy is targeted not only to Fab Labs. We want to involve:

OPEN BOOTCAMPS

- Schools & Universities
- Artisans, Craftsmen & Artists

CLOSED BOOTCAMPS

- Instructors
- Textile Labs
- Textile industry and companies working on more environmental friendly processes

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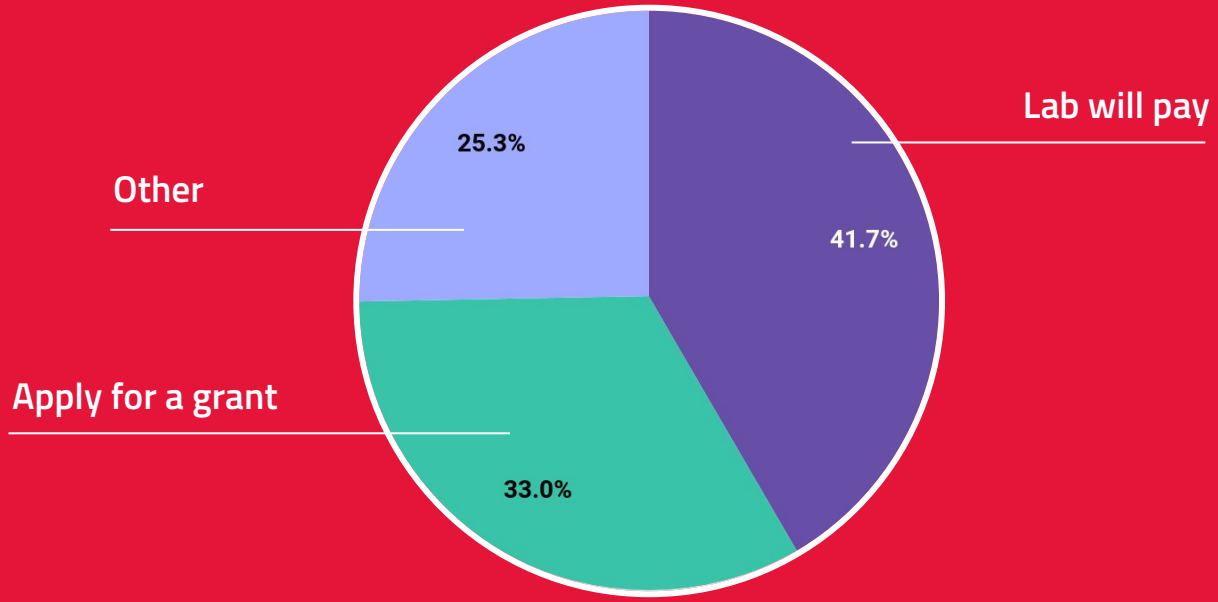
FUNDING STRATEGIES



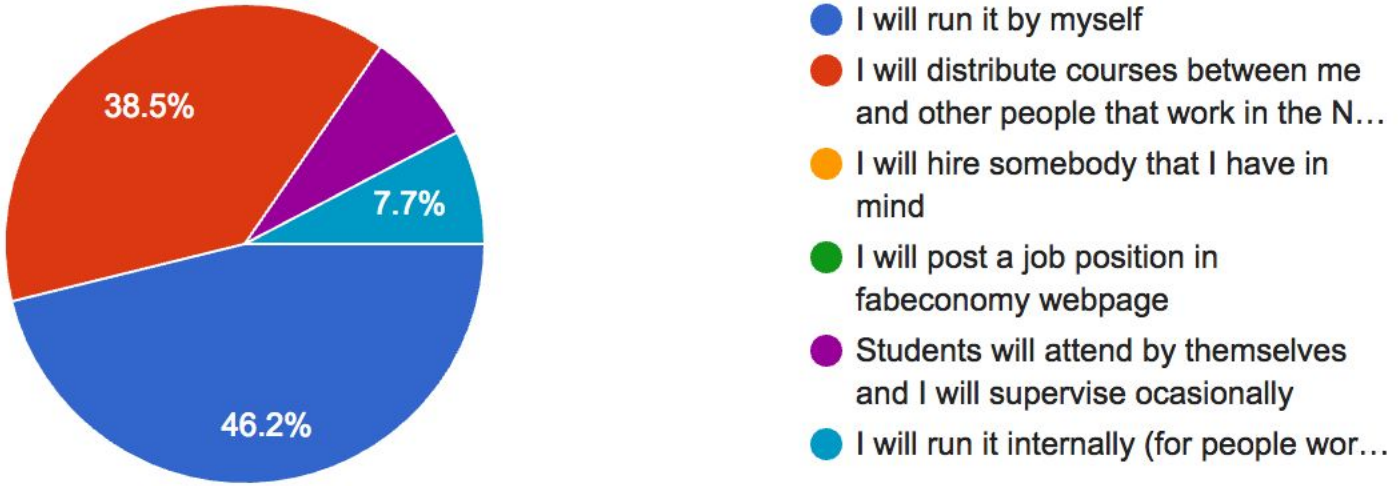
COST MODEL

Similar to Fab Academy, main differences:

- **Labs collect payments from students**
- **The total cost is determined by the local lab**
- **Central costs decrease after the first 5th student registered**

INSTRUCTOR TRAINING

Who is the local tutor of your Lab that will run Fabricademy?



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Textile-Academy 2018 at a lab near you

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TEXTILE ACADEMY BOOTCAMP 2018

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Join TODAY at a lab near you

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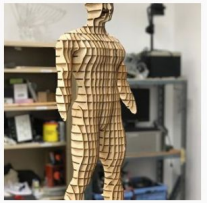

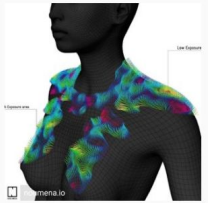

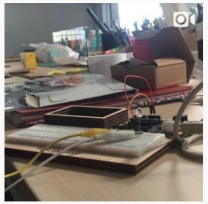

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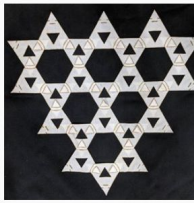

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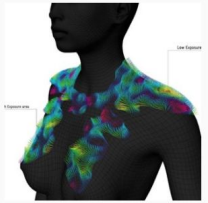

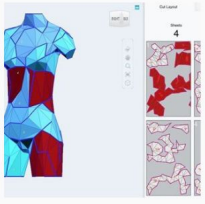

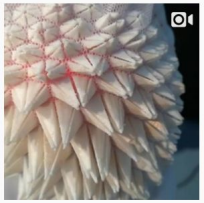
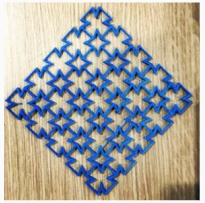
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