ARIANA RUPP

Portfolio

201**2**|201**4**

Industrial Design Projects

Ariana Rupp Designer

The aim of this portfolio is to share the main projects developed during a **Product Design** master's program (2012-2014), at the Faculty of Architecture, University of Lisbon. Illustration / sketching side projects are also shown in the end.

Multidisciplinary contexts and new challenges pollinate my work like nothing else, puzzle me to **evolve** and adapt. After experiencing different systemic approaches to problem-solving, also during an undergraduation in **Physics Engineering** at the Higher Technical Institute, **Biomimicry** is my most recent passion, design bloom inspired by the genius of Nature, towards sustainable technological innovation.

As a designer with polymathic ambition, I'm especially interested in Materials Engineering, parametric modeling and CNC manufacturing. I have the chance to get involved in such projects at the Lisbon City Hall' s **fabrication laboratory**, where I'm volunteering technical support.

Contents

Sun Comeback

Systemic Houseware

Wireless · Water-proof · Activity rooms

Healthcare design project
December 2013

Sun Comeback system aims to promote **healthy** and sustainable lighting, especially in nursing homes, by enriching domestic life and integrating equipment for greater use of daylight.

We developed a range of lighting and **light therapy** products, in order to bring sunlight into enclosed places, to people with limited access to outdoors. Houseware objects for structured daily routines and different housing contexts take advantage of natural resources systemically. Their **interoperability** and **modularity** provide maximum adaptation to the specific needs of the user and its surroundings.

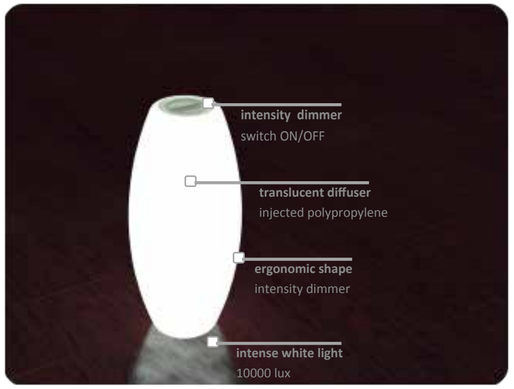
1
SUN PACK
Portable lamps
14 x 14 x 30 cm

2
SUN TRACK
Progressive floor lamp
14 x 61 x 170 cm

3
SUN RACK
Light shelfcase
88 x 25 x 105 cm

Ariana Rupp
Coordinator: Dr. Rui Marcelino

Renders with V-Ray for Rhino

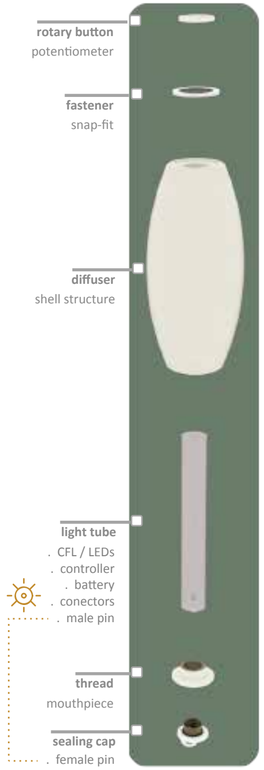


SUN PACK SET UP
3/4 Perspective
Render

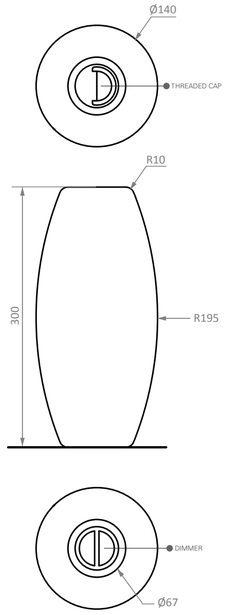
SUN PACK IN LIGHTED ENVIRONMENT
3/4 Perspective
Render

SUN PACK IN DARK ENVIRONMENT
3/4 Perspective
Render

ASSEMBLY
Exploded view
Render



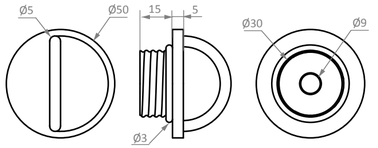
DOWN, FRONTAL AND UPPER VIEWS
2D Projections
Technical design
dimension units mm
scale factor 1:5



DIMMER VIEWS
2D Projections
Technical design
dimension units mm
scale factor 1:2

DIMMER ERGONOMICS
User perspective
3D printed plaster
scale factor 1:1
Photograph

THREADED CAP VIEWS
2D Projections
Technical design
dimension units mm
scale factor 1:2

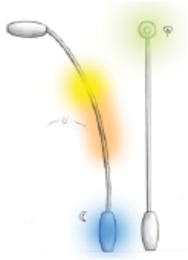


OVERALL ERGONOMICS
User perspective
Photograph

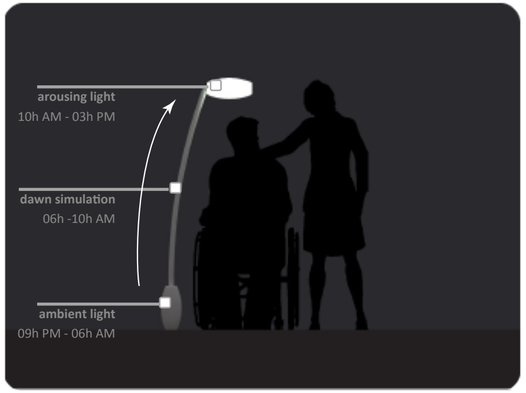
MISE-EN-SCÈNE
Space perspective
painted milled polyurethane
scale factor 1:1
Photograph

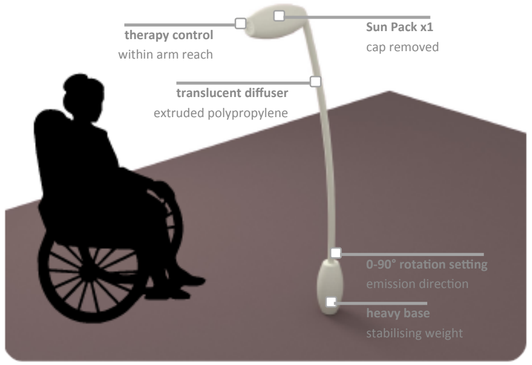
MISE-EN-SCÈNE
Object perspective
Photograph

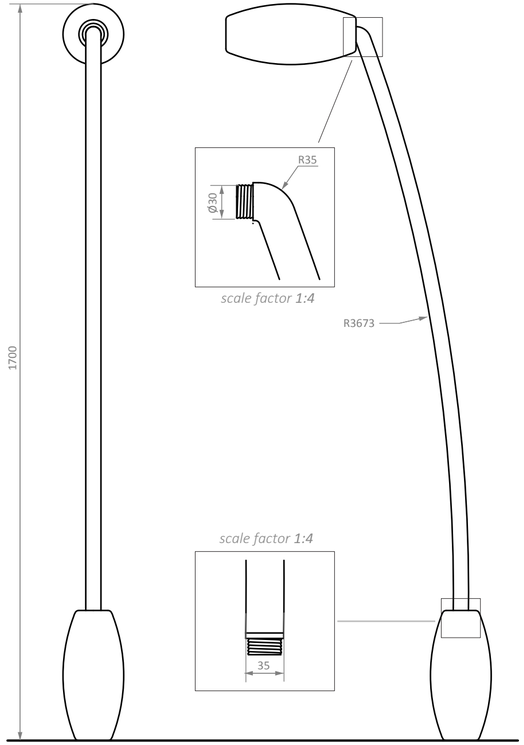
SUN RACK LIGHT CONCEPT
2D Projections
Sketch, Photoshop



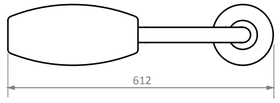
SUN TRACK IN DARK ENVIRONMENT
2D Projection
Render







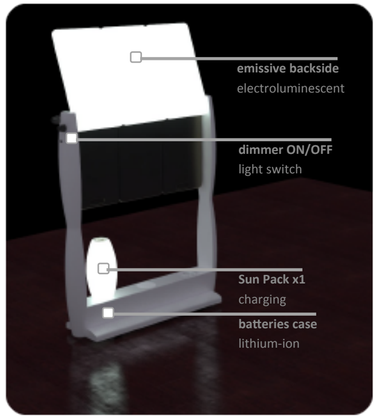
BACK, SIDE AND UPPER VIEWS
2D Projections, details
Technical design
dimension units mm
scale factor 1:10



SUN TRACK SET UP
3/4 Perspective
Render

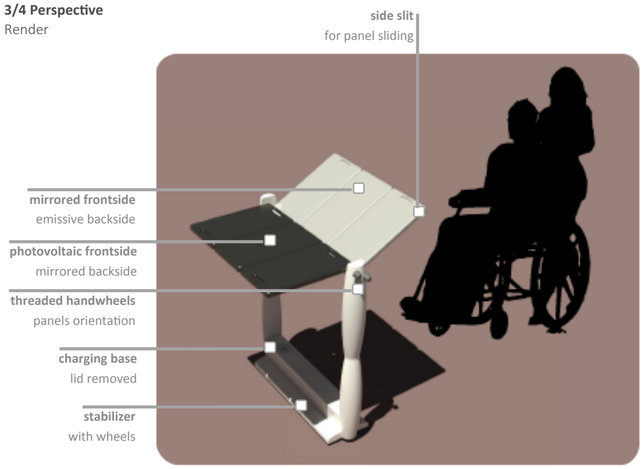
■ 24-hours program ■ Rest rooms

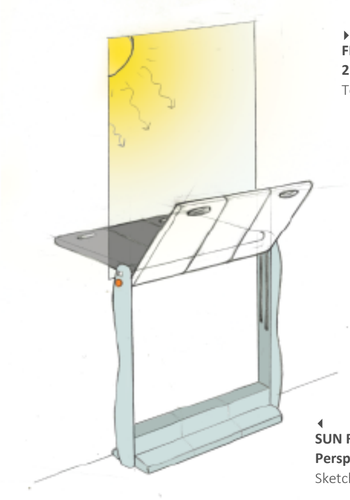
SUN RACK IN DARK ENVIRONMENT
3/4 Perspective
Render



SUN RACK USE UNDER DAYLIGHT
3/4 Perspective
Render

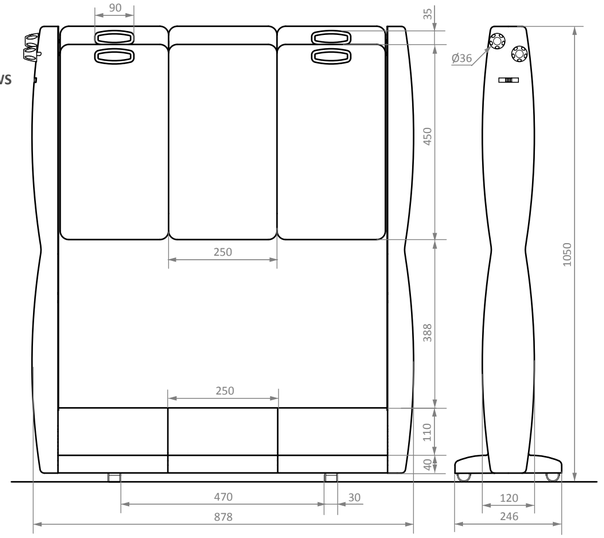
■ Multifunctional ■ Common rooms





SUN RACK SET UP
Perspective
Sketch, Photoshop

FRONT AND SIDE VIEWS
2D Projections
Technical design
dimension units mm
scale factor 1:10



Orion
Driverless Tram

Integrated mobility system project
June 2013

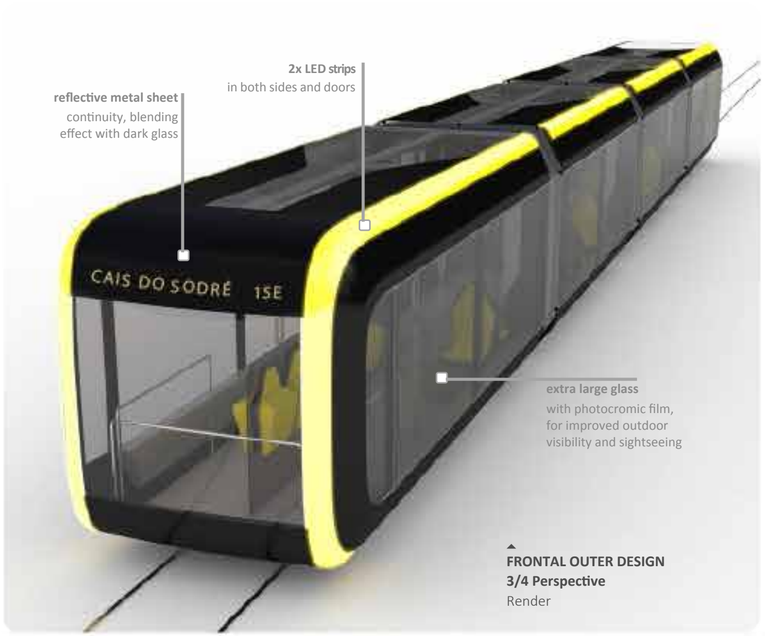
The aim of this project was to develop an **urban public** transportation within the scope of sustainability, from its design to any associated interior equipment: chairs, seats, railings, ticketing machines, among others.

Orion concept was destined to line 15 of Carris network of Lisbon, a **touristic** route between Cais-do-Sodré and Belém, frequently used by **seniors** and persons with reduced mobility. The vehicle doesn't need driver or overhead lines, powered by **Gallileo** and **APS** systems.

Modern technology and aesthetics define this tram's design, with extra-large panoramic windows and a skylight pattern, an open-air balcony and eye-catching LED lighting that evokes a shooting star.

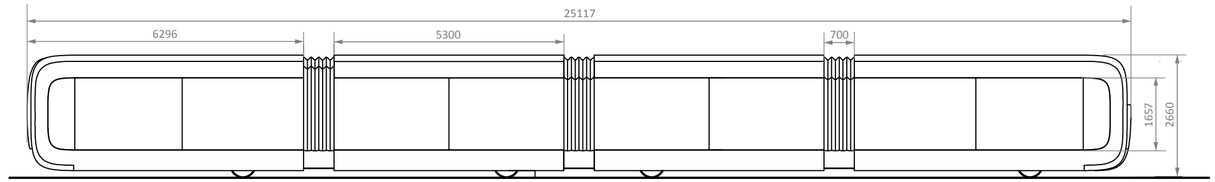
Ana Silva, Ariana Rupp, Sofia Malato
Coordinators: Dr. Rui Marcelino,
André Castro

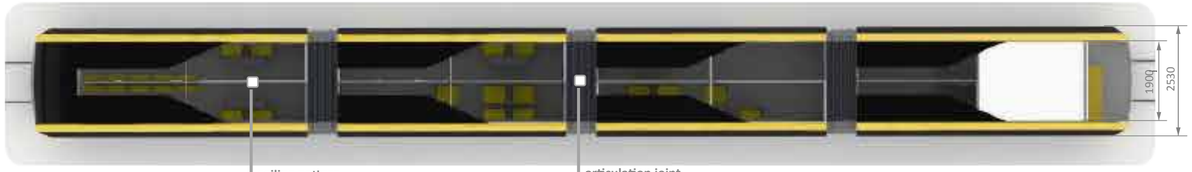
25 x 2.55 x 2.60 m
Renders with V-Ray for Rhino



FRONTAL OUTER DESIGN
3/4 Perspective
Render

OUTER SIDE DESIGN
3/4 Perspective
Render

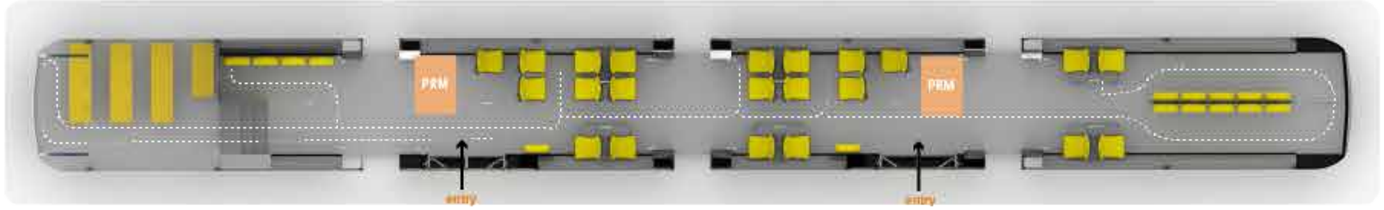




SIDE AND UPPER VIEWS
2D Projections
Technical design, render
dimension units mm
scale factor 1:100

FRONTSIDE DESIGN
Longitudinal cross-section
Render

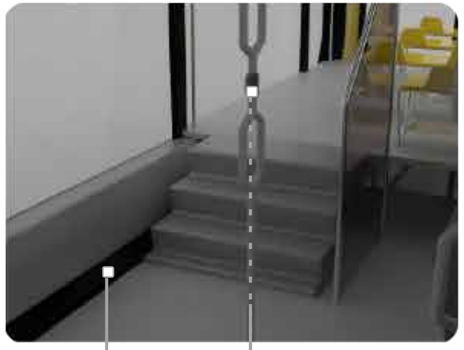
BACKSIDE DESIGN
Longitudinal cross-section
Render



CIRCULATION MAP
Plan
Schematic render

3-CAR TRAM
Side perspective
painted milled MDF
scale factor 1:10
Photograph

BALCONY ENTRY
Perspective
Render



MODULE CAR
Perspective
Render

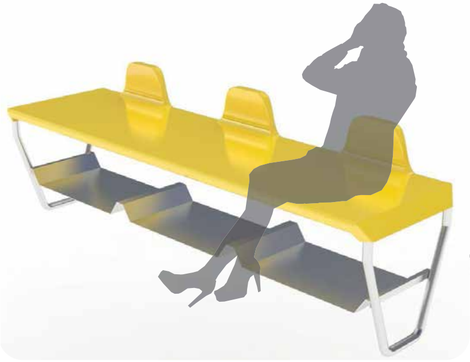
CHAIRS MODULE
Ergonomic perspective
Render

CHAIRS MODULE
Perspective
Sketch

CHAIR SEAT
Exploded view
3D printed model

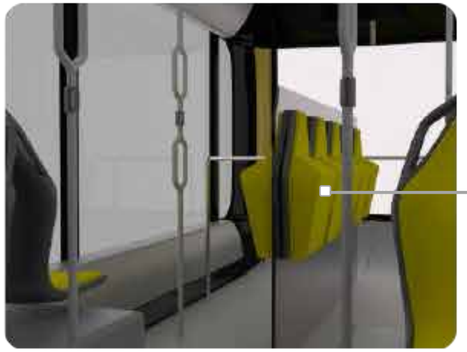
3-CAR TRAM
Upper perspective
painted milled MDF
scale factor 1:10
Photograph

BALCONY PLASTIC BENCH
Ergonomic perspective
Render

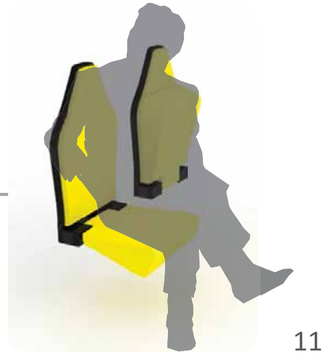


BALCONY
Perspective
Render

FRONTWARDS CAR
Perspective
Render



FOLDING SEAT / BACKREST
Ergonomic perspective
Render



FabLab
Interiors

Facilities design specifications
December 2013

It was intended to equip a space from Lisbon City Hall's **fabrication laboratory**, and create a comfortable but professional environment in order to meet all the staff's needs

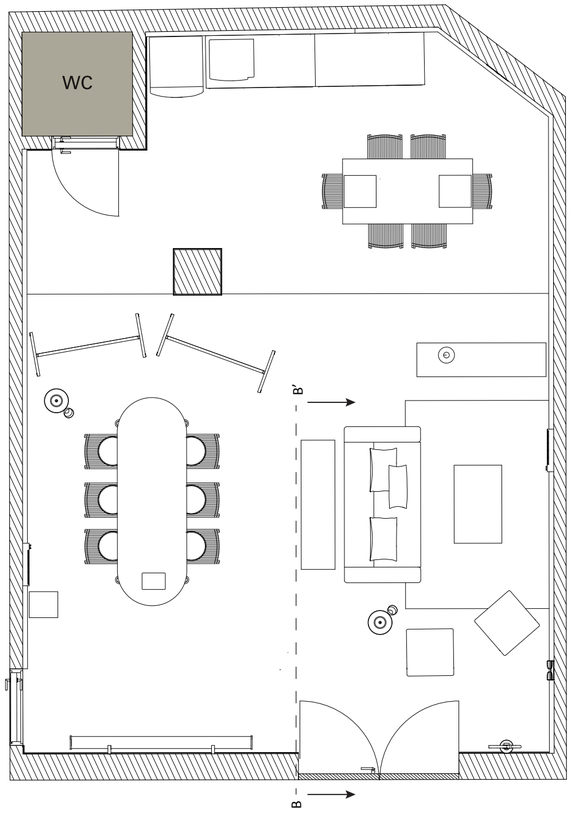
FabLab's infrastructures come from an **industrial** complex, so both floor and walls linings have a cold, depersonalized appearance. In spite of the façades's open-air upper perimeter indoor natural lighting is insufficient.

The interiors concept sought to develop a multifunctional and recreational space, using affordable and accessible equipment. Three key areas were defined: **office,** for group work and meetings with clients; convivial ambiance, for **leisure**; dining area, with **kitchenette**. To make the best of the reduced space , we divided these three zones through equipment positioning, different wall finishing and floor type.

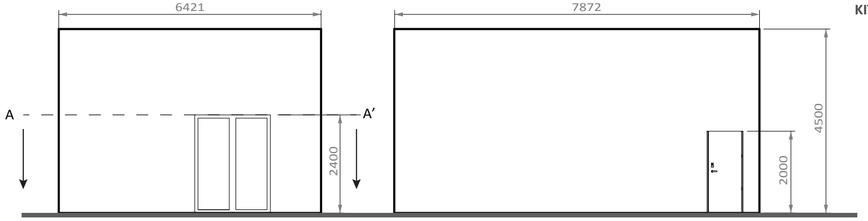
Ariana Rupp, Mariana Filipe, Sofia Malato
Coordinator: André Castro

25 x 2.55 x 2.60 m
Renders with V-Ray for Rhino

PLAN
Cross-section A-A'
Technical design
*scale factor **1:50***



VIEWS
FRONT, SIDE
2D Projections
Technical design
*dimension units **mm***
*scale factor **1:100***



OFFICE
FRONT, BACK
Perspectives
Renders

LIVING ROOM
FRONT, BACK
Perspectives
Renders

KITCHEN / LIVING ROOM
SIDE VIEW
Cross-section B-B'
Render
*scale factor **1:25***

KITCHENETTE
Perspective
Render

Milk Packaging

Logoplaste design challenge
December 2012

The goal was to propose a sufficiently distinctive design for a 6 pint capacity HDPE milk packaging. Solutions should be versatile and work out for different brands.

Moo bootle with handle was the first suggestion. By incorporating shape details evoking cow anatomy, packaging use becomes not only more practical but also amusing. This bottle can be layed on the table: pouring is easily controlled by rotating the cap.

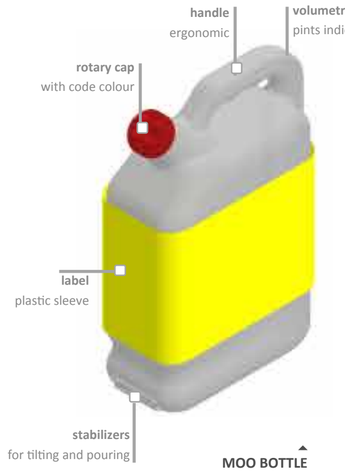
Milkcomb was bio-inspired by honeycombs, for their highly resistant hexagonal packing structure with optimal volume per surface quotient. Theses features are ideal for optimized storage space and sustainable packaging where less material is needed. Also, there is a marketing opportunity for more creative labeling. Milkcomb's ergonomics doesn't require handle.

Ariana Rupp
Coordinator: Dr. João Martins

20 x 10 x 29 cm
Renders with Rhino, SolidWorks

MARKET CONTEXT
Perspective
Render

LABELING TESTS
Perspectives
Renders



MOO BOTTLE
Perspective
Render

BACK, SIDE AND UPPER VIEWS
2D Projections
Renders
dimension units ***mm***
scale factor ***1:4***

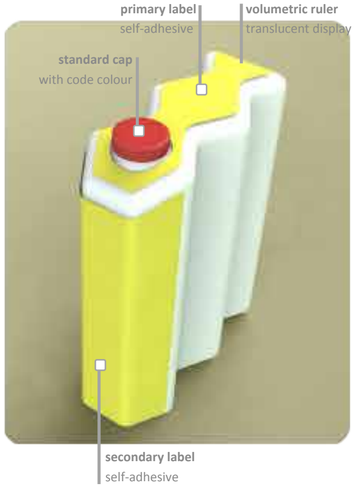
USABILITY
User perspective
Render, sketch

MISE-EN-SCÈNE
Object perspective
Render, sketch

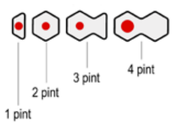
CAP USABILITY
User perspective
Render, sketch

OPTIMIZED "HONEYCOMB" STORAGE
Upper, perspective view
Renders

MILKCOMB BOTTLE
Perspective
Render

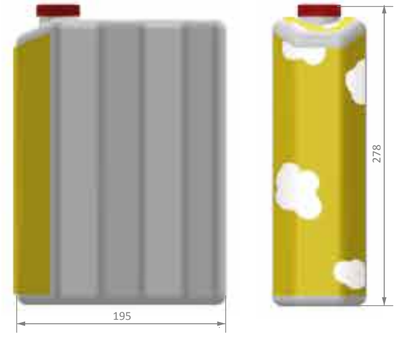


MILKCOMB BOTTLE FAMILY
Upper view
Graphics



LABELING EXPERIMENTS
Perspectives
Renders

MISE-EN-SCÈNE
Object perspective
Photograph



SIDE, FRONTAL AND UPPER VIEWS
2D Projections
Renders
dimension units ***mm***
scale factor ***1:4***

MARKET CONTEXT
User perspective
Sketch, Photoshop

PORTABILITY
User perspective
Sketch, Photoshop

TESTING MODEL
Ergonomics
painted polyurethane
scale factor 1:1
Photograph

Ydra Connector

Power plug rapid prototyping
December 2013

It was intended to develop a power plug with a strong social dimension, through a more **inclusive** design. In work contexts like offices, ateliers, university study rooms and libraries, access to the electricity grid is usually limited. In order to provide **grid connection** to more users, enhancing better communication and easier team work, we targeted frequent **laptop users** in spaces with few electrical outlets.

Many rapid prototyping techniques (3D printing, mould milling and laser cutting) and different **materials** were used to explore this product: ABS plastic, modelling clay, homemade potato starch bioplastic, rubber silicone (with a dye) and cardboard. This allowed good usability **testing**.

Ariana Rupp, Inês Montez, Paulo Sellmayer, Sofia Malato
Coordinator: Dr. Paulo Dinis

Graphics with Illustrator

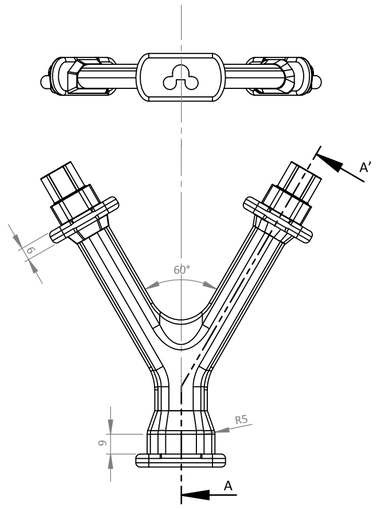
PRODUCT PROTOTYPE
15 x 12 x 2 cm
Photograph

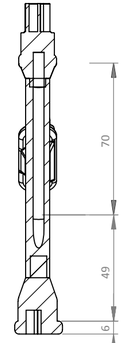
BRANCHING
Tree type connection
Render

BRAND DESIGN
Packaging labels
Graphics

PACKAGING PROTOTYPE
Laser-cutted cardboard
16 x 16 x 3 cm
Photograph

DOWN, FRONT AND SIDE VIEWS
2D projections, cross-section
Technical design
dimension units ***mm***
scale factor ***1:2***



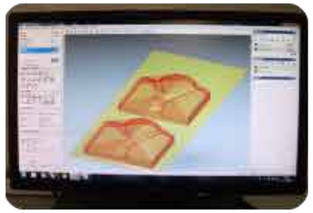


SECTION A-A'

TECHNICAL-CONSTRUCTIVE ANALYSIS
Electrical components
Photograph

TESTING MODEL
Dimensioning and ergonomics
Photograph

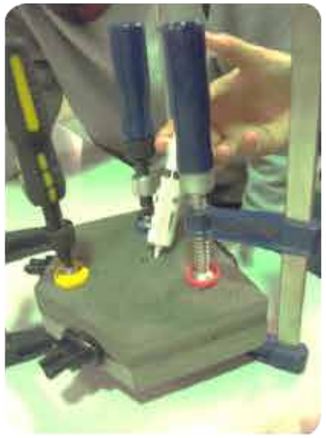
MACHINING SET UP
ArtCAM 3D relief model
Photograph



MDF MOULD MILLING
CNC router at Fablab Lisboa
Photograph

VALCHROMAT MOULD + 3D PRINTED PIECES
Fitting with wax, lip balm release coating
Photograph

RUBBER SILICONE MOULDING
Syringe injection
Photograph



PROTOTYPE VS IEC60320
Product comparison
Photograph

UNPLUGGING
Ergonomic test
Photograph

Pescada
Wood hammock

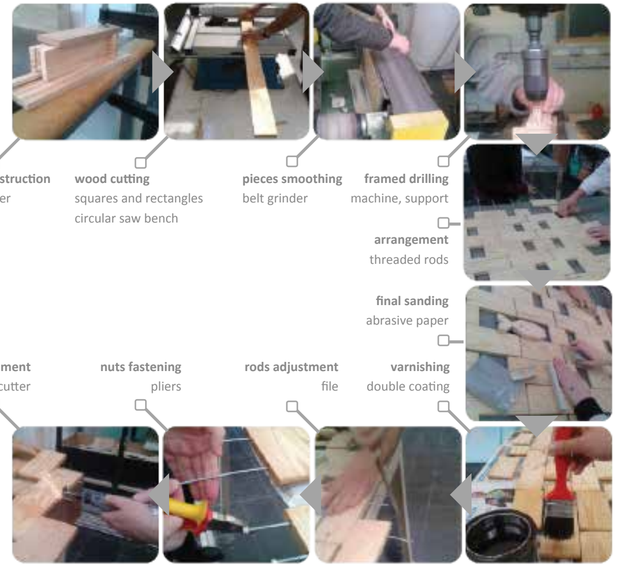
Wood and metalworking

June 2013

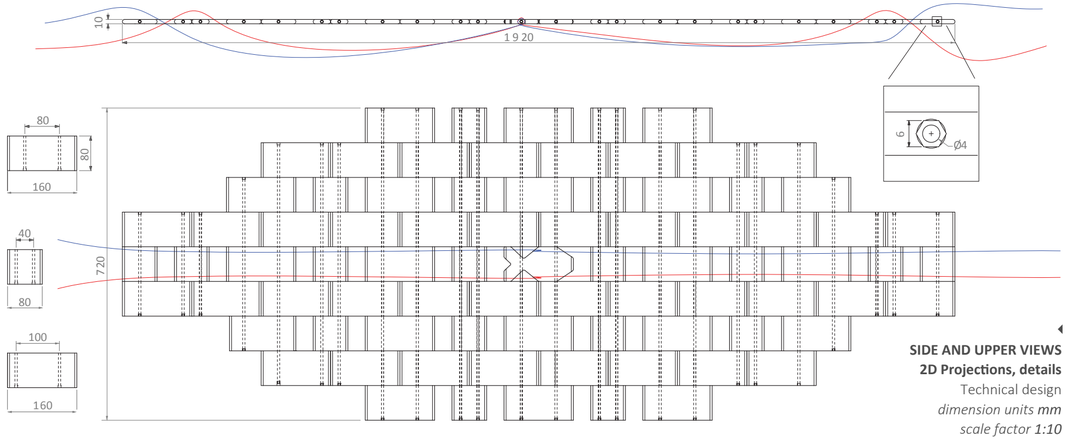
Students were expected to design and **craft** a product in the faculty's workshop. Pescada can be used in **outdoor** environments for rest or reading. It has a **sculptural** character with a strong geometric expression, despite its clean design based on the natural aesthetics of pine wood. The **jointed** structure provides a pliable backrest resistant to mechanical loads and can be folded for transportation and storage. The allusion to **marine universe** gives a distinctive touch of humour.

António Vieira, Ariana Rupp, Élen Sayuri
Coordinator: Dr. João Pardal Monteiro

1 x 72 x 192 cm
Graphics with Illustrator



CRAFT PROCESS
Step by step
Photographs



SIDE AND UPPER VIEWS
2D Projections, details
Technical design
dimension units ***mm***
scale factor ***1:10***

PRODUCT PROTOTYPE
1920 x 720 x 10 mm
Photograph

BRANDING
Label logo
Graphics

TESTING MODEL
Dimensioning and ergonomics
cardboard, wire
scale factor 1:50
Photograph

Handmade Design

Everyday objects exercise
October 2012

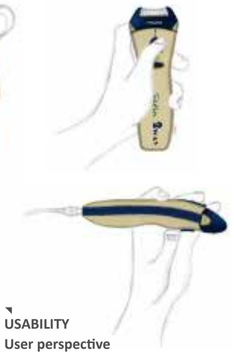
The purpose was to practice critical observation of human environment, broadening and deepening a designer perspective on **ordinary objects** and respective contexts. **Satinelle Precise HP2810 Philips**, an epilator for sensitive parts of the body, is a well designed device but has a **narrow market scope**.

In this critique, we presented two up-to-date design alternatives. **Satinelle Ice** includes a removable acessory roller for **pain relieving** that can be freezed in the the refrigerator. **Satin 2way** intends to attract a constantly growing **male public**, and therefore has a classic, elegant and androgynous design.

Ariana Rupp
Coordinator: Dr. João Martins

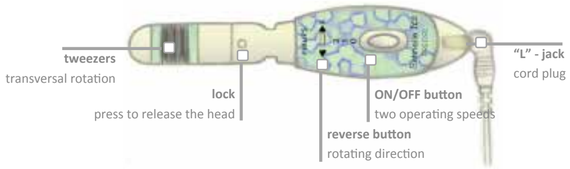
4 x 4 x 15 cm
5 x 3 x 16 cm

STUDIED EPILATOR
User perspective
Sketch, Photoshop



USABILITY
User perspective
Sketch, Photoshop

USABILITY
User perspective
Sketch, Photoshop



SATINELLE ICE
Front view
Sketch, Photoshop

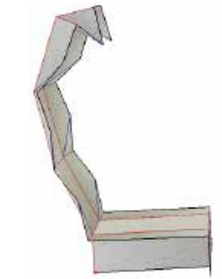
SATIN 2WAY
2D Projections
Sketch, Photoshop

ACCESSORIES
2D Projections
Sketch, Photoshop

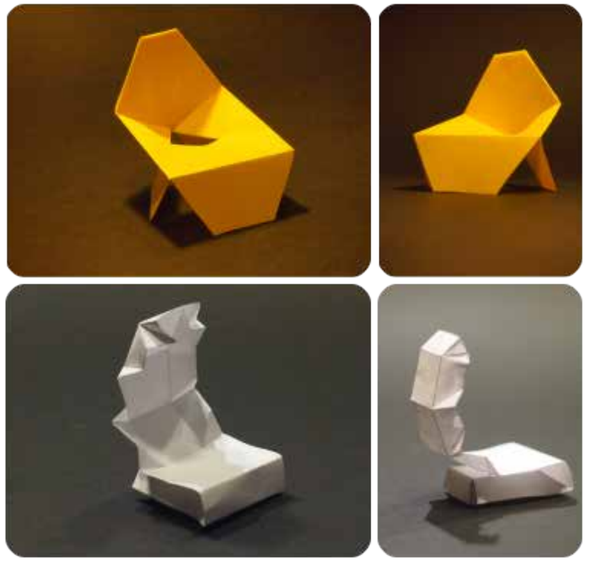
Chairigami study
April 2013

Freeing geometric modeling from CAD software, designers can use origami not only for conceptual research but also because of its industrial advantage: flat-foldable sheets of material can easily become 3D objects at any scale, such as structurally stable furniture capable of holding a person.

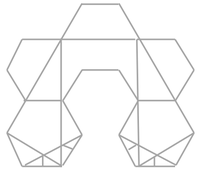
Ariana Rupp
Coordinators: Dr. Pedro Januário, Dr. Mário Kong

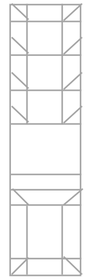


FREEFORM SOFTWARE MODEL
Profile perspective
Render



ORIGAMI MODELS
Perspectives
Photographs

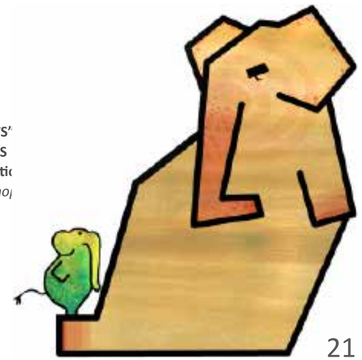




FOLDING MAPS
Outline diagrams
Graphics

CELLPHONE
Sketching course
Faculty of Architecture
University of Lisbon
Sketch,color markers

"CHAT WITH ELEPHANTS'
by MARGARIDA SANTOS
New Media and Illustratic
Fine Arts Faculty worksho
University of Lisbon
Sketch, Photoshop



Digital Doodles

Graphic design experiments
2011-2012

In order to explore digital tools and understand their potential for creative processes, we went for free-themed illustration experimenting. Some samples were designed during a **Illustration and New Media workshop**, at the Fine Arts Faculty, University of Lisbon.

Different conceptual approaches were taken. Since **pattern design** becomes significantly easier, Mathematics, from fractals concept to logistic map distribution, inspired some of the illustrations. Numerical algorithms and computational programming can produce interesting mosaics as well. With Photoshop, we could take advantage of layer / filter features to create **unconventional** graphic languages.

Ariana Rupp

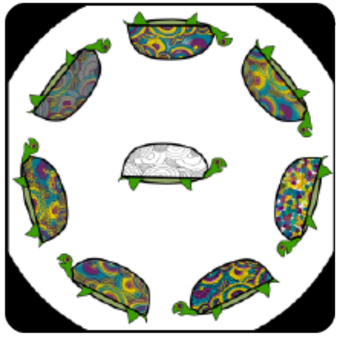
Illustrations with Illustrator, Photoshop

MOUNTAINS
MS Paint art
Illustration

CAT FRACTAL
Pattern
Illustration

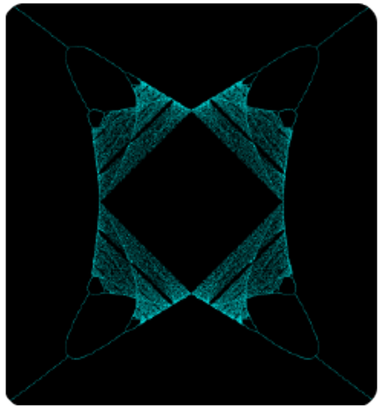
SELF-PORTRAIT
Conceptual
Illustration

TURTLES
Pattern
Illustration

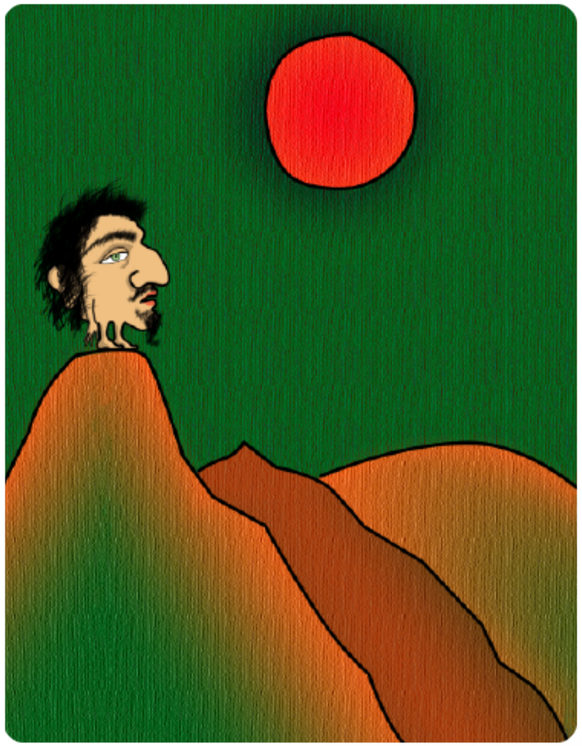


SPIDER
Photoshop art
Illustration

COMPUTATIONAL ART
Logistic map
Illustration



THE HERMIT
Humour
Illustration



CASPER & DONUTS
Humour
Illustration

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