

tensile architecture

international student workshop

Lyon 2012



1000 KG

international student workshop

Ecole Nationale Supérieure d'Architecture
de Montpellier, France

Ecole Nationale Supérieure d' Architecture
de Nancy, France

Ecole Nationale Supérieure d' Architecture
de Grenoble, France

School of Architecture, HTW
University of Applied Sciences, Germany

University of Applied Sciences, Saarbrücken
School of Architecture

1st edition 2012



index

1. preface
2. programme
3. teachers
4. students
5. study trip
 - Saline Royale d' Arc et Senans, Ledoux
 - Salins les Bains
 - Lyon, Le musée gallo-romain, Zehrfuss
 - La ville der Lyon
 - Lyon, La Cité Internationale, Piano
 - Gare du TGV à Lyon Satolas, Calatrava
6. workshop
7. studies
9. projects
 - la lanterne
 - moving ball
 - la vague
 - l' arc tendu

preface

several years ago, the cooperation between the ENSA nancy, france and the HTW saarbrücken, germany started in the field of light weight structures. last year two more partners from france joined the coope-
ration ENSA grenoble and ENSA montpellier for a joint workshop on membrane structures, held in march
2012 at the 'grands ateliers' in lyon, france. the purpose of this year workshop was the modelling and
construction of large scale membrane constructions with special focus on the realisation of models.

during the one week workshop colleagues and students from the four participating european univer-
sities worked closely together at the 'grands ateliers'. this location is perfectly equipped and designed
for hosting workshops oriented towards the main purpose of the 'grands ateliers' which is experimental
constructing. the region rhônes-alpes has set up the 'grands ateliers' for universities in the greater region
to enhance innovation in construction methods and modelling.

on the way to lyon the participating workshop members had the opportunity to visit several examples of
modern architecture.

programme

international student workshop, architecture of tensile constructions
ENSA montpellier, ENSA nancy, ENSA grenoble, HTW saarbrücken

date: 19st march to 23th march 2012

project: the design and realisation processes of the tensile architecture are the heart of the training. theoretical aspects of form finding, pre-dimensioning as well as cutting pattern are presented. afterwards there is an application in physical reality with small model experiments and scale 1 to 1 realisation for a textile structure with free purpose.

objectives: the purpose of this training, is to give theoretical and practical basics of the textile and cable nets building design. each step of the design process is clearly described in order to overcome the complexity and allow the students to use these new design tools directly in an architectural practice. the proposed experiments use the professional materials in order to well understand the specific knowledge needed by the company technicians.

participants: 28 students of the ENSA nancy
23 students of the ENSA grenoble
4 students of the HTW saarbrücken

teams: mixed

teachers: ENSA montpellier: Nicolas Pauli
ENSA nancy: Daniel Gross
HTW saarbrücken: Klaus Köehler

studio: les grands ateliers de l'isle d'abeau, villefontaine

equipment: all provided by les grands ateliers

material: all provided by les grands ateliers

teachers



Prof. Nicolas Pauli

ENSA montpellier



Prof. Klaus Köehler

HTW saarbrücken

Prof. Daniel Gross

ENSA nancy



Prof. Oliver Baverel

ENSA grenoble





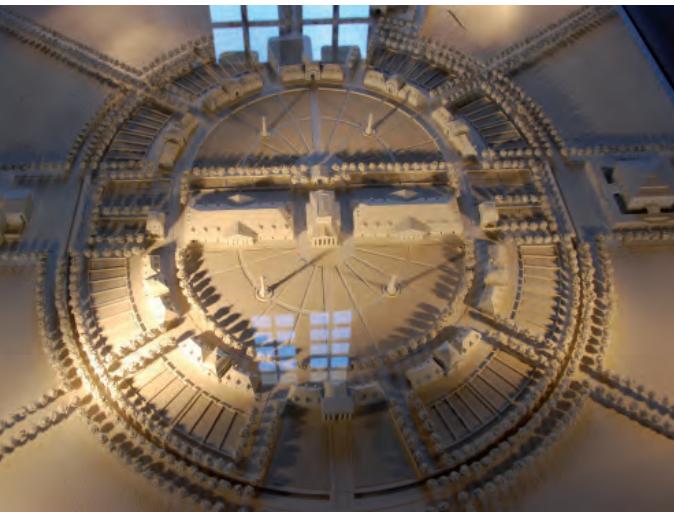
students

Avons-Bariot Julie	Grenoble	Amrani Rymel	Nancy
Charrel Céline	Grenoble	Aubery Clemence	Nancy
Chaubet Lilian	Grenoble	Baudier Emilie	Nancy
Constans Adrien	Grenoble	Bauza Lima César	Nancy
Deliry Maëva	Grenoble	Batoul Smail	Nancy
Duchosal Julien	Grenoble	Bensidhoum Lynda	Nancy
Flahaux Cécile	Grenoble	Binachon Brice	Nancy
Foutelet Armand	Grenoble	Brouillet Mélissa	Nancy
Gamon Matthieu	Grenoble	Chanot Gwenaëlle	Nancy
Gisonda Johan	Grenoble	Colinet Milène	Nancy
Halfants Dorian	Grenoble	Halbgewachs Cécile	Nancy
Lias Elodie	Grenoble	Houamel Thamer Fares	Nancy
Mark Rachel	Grenoble	Jacquotout Eddy	Nancy
Nicoud Mélody	Grenoble	Kopinski Vanessa	Nancy
Ozturk Ummuhan	Grenoble	Leroij Quentin	Nancy
Ross Keven	Grenoble	Marquis Adeline	Nancy
Rosat Antony	Grenoble	Marzano Aurélia	Nancy
Sewanou Marcel	Grenoble	Meyer Julien	Nancy
Studer Dora	Grenoble	Ouanes Sofiane	Nancy
Trudelle Jean-Benoit	Grenoble	Peron Jean-Baptiste	Nancy
Vauchel Morgane	Grenoble	Rein Jennifer	Nancy
Verret Victoria	Grenoble	Roure Sylvaine	Nancy
Wright Catherine	Grenoble	Sahli Amina	Nancy
		Simmandree Hemant	Nancy
		Thomas Hélène	Nancy
André Annika	Saarbrücken	Vivani Sara	Nancy
Höning Johannes	Saarbrücken	Winiarska Ewa	Nancy
Huffer Simon	Saarbrücken	Warhouver Léna	Nancy
Wollbring Florian	Saarbrücken		

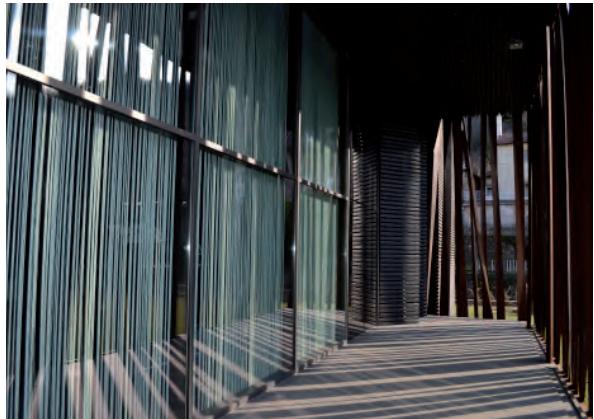


study trip

Saline Royale d' Arc et Senans



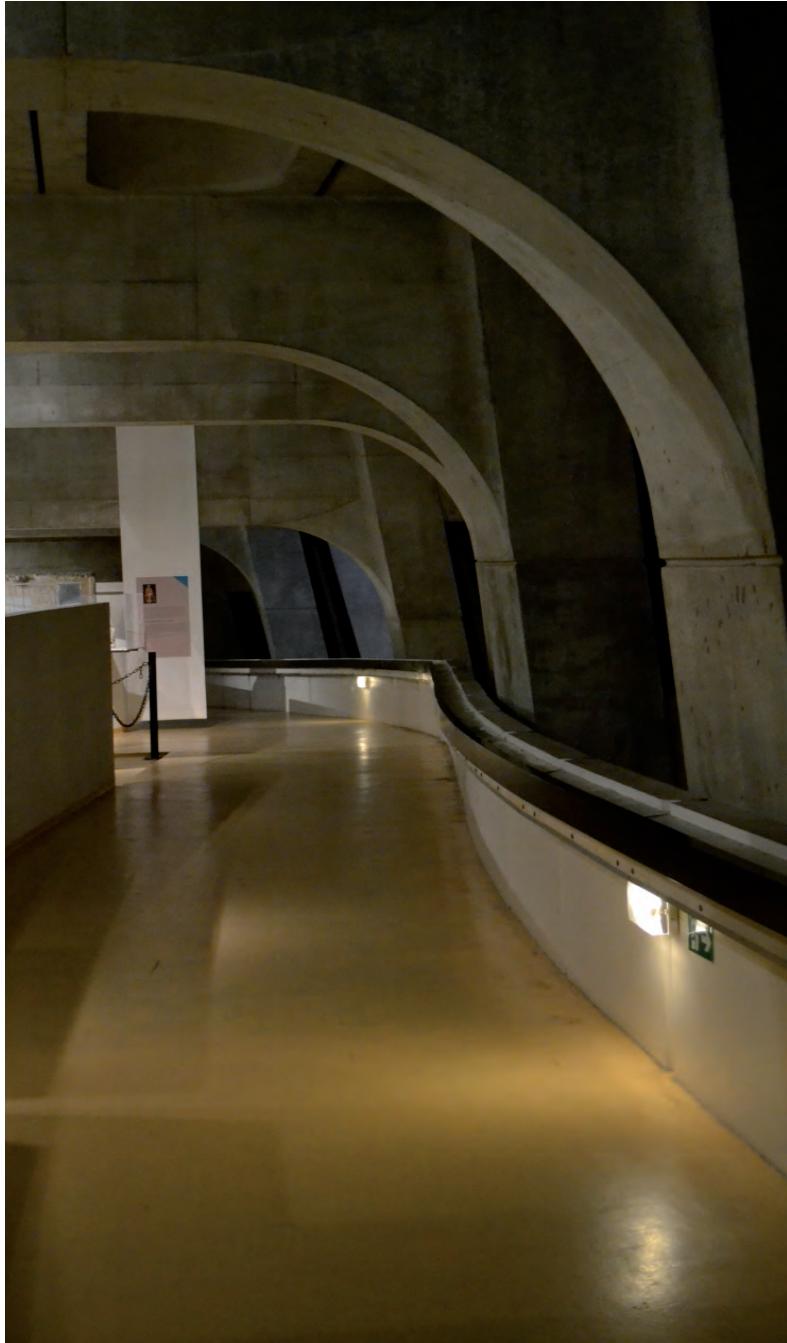
Salins les Bains



La ville de Lyon



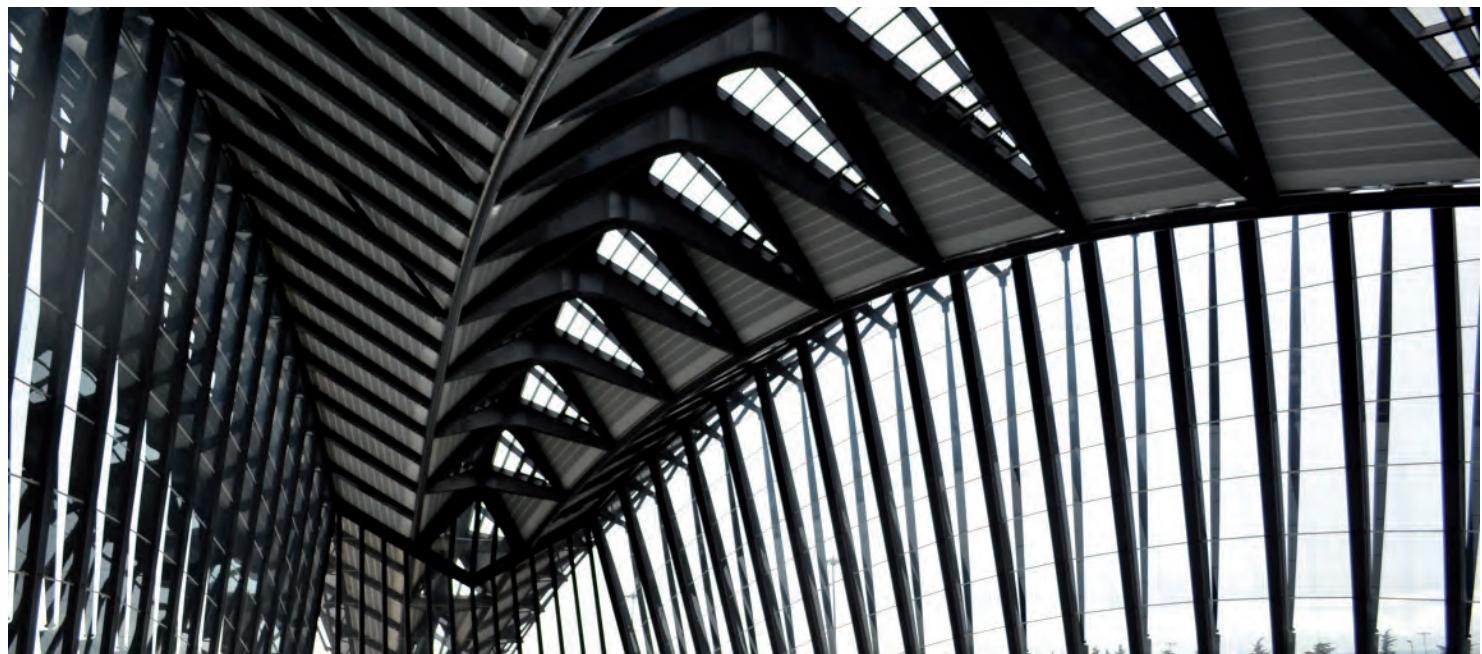
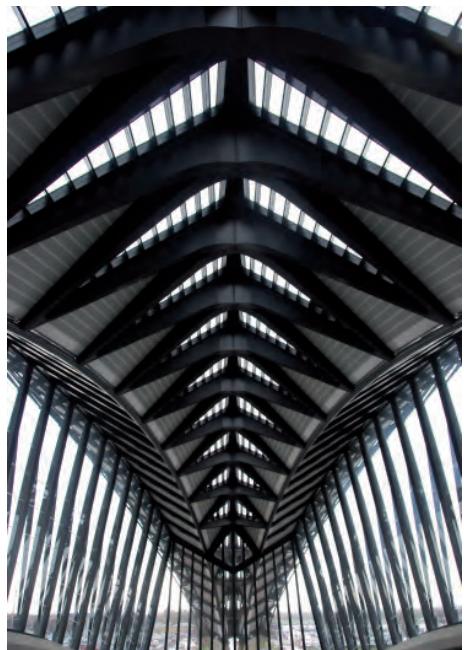
Le musée gallo-romain



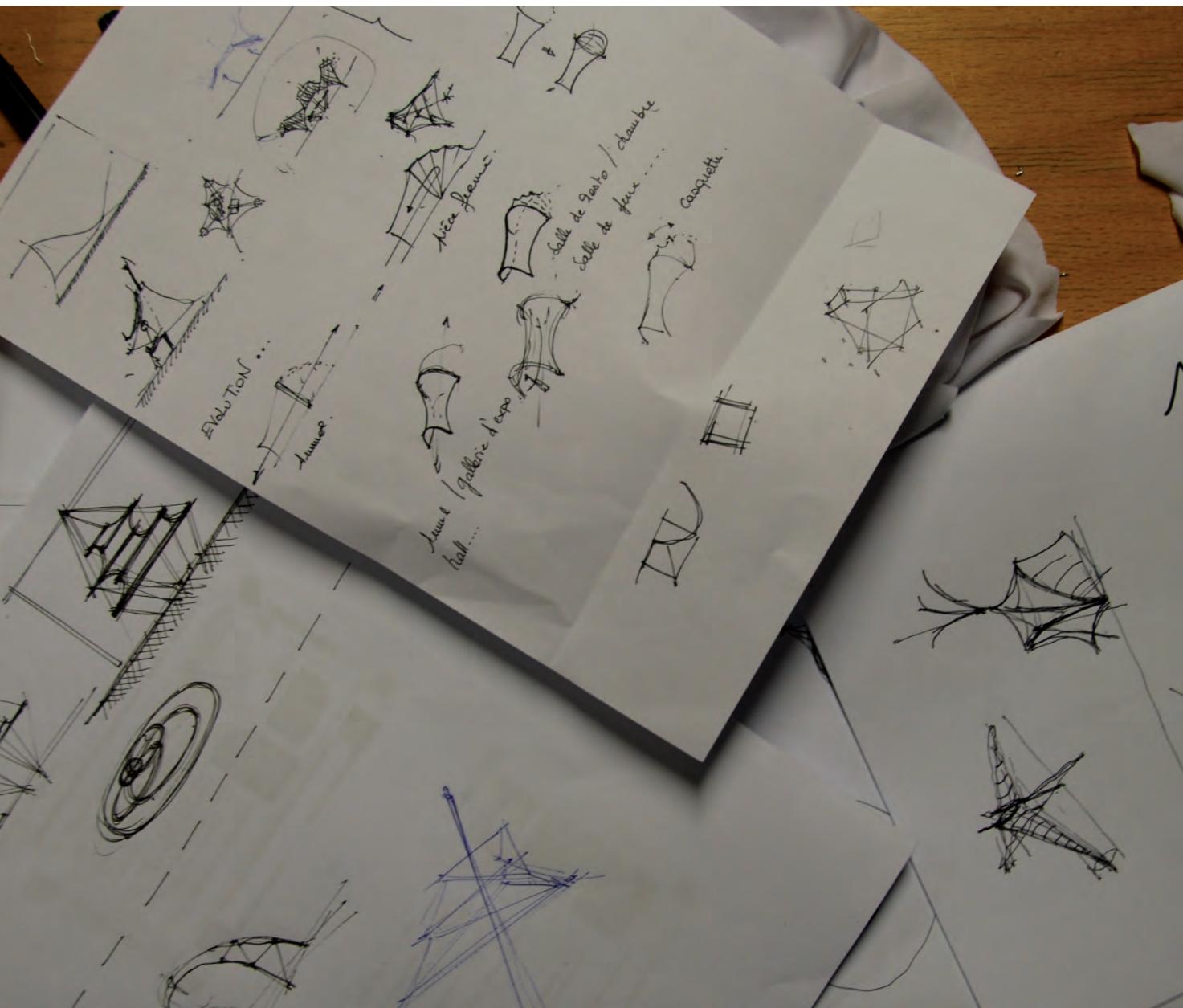
La Cité Internationale



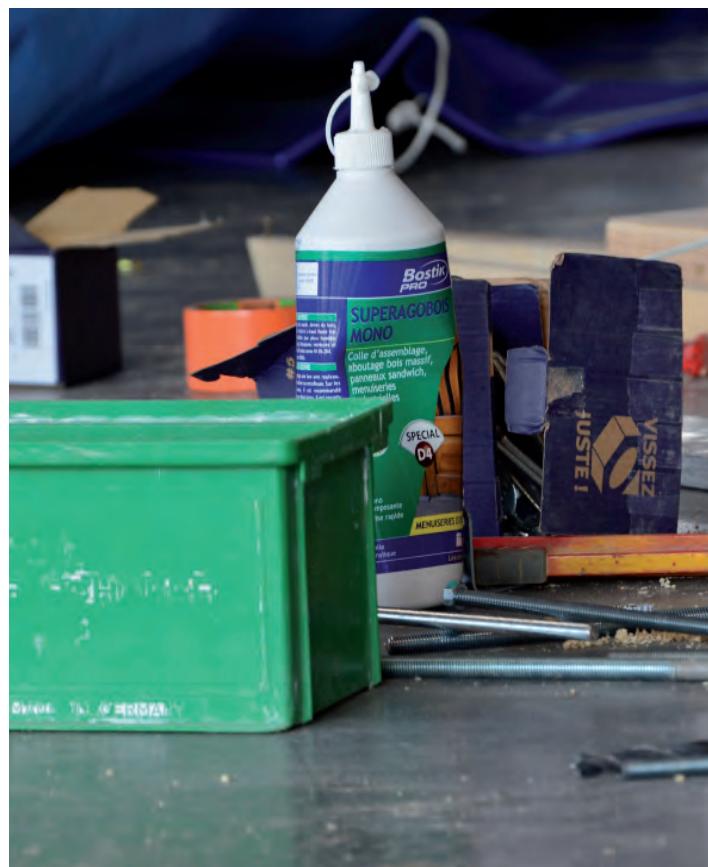
Gare du TGV à Lyon Satolas



workshop















sortie

SORTIE
DE SECOURS







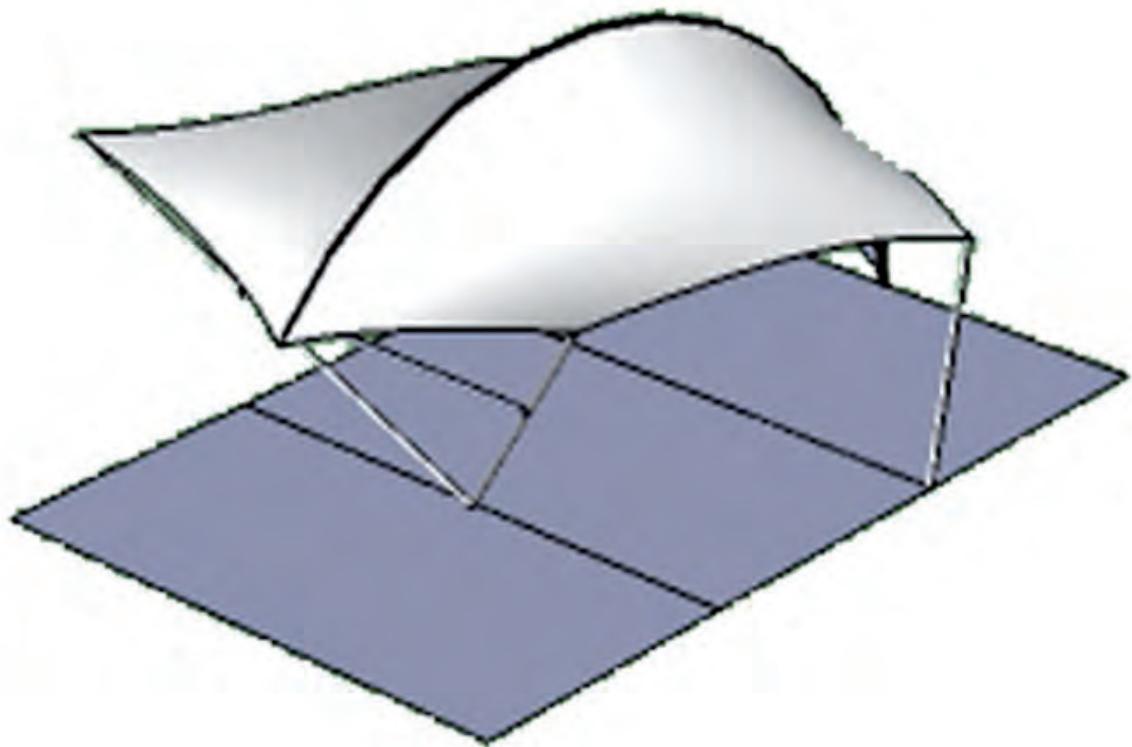


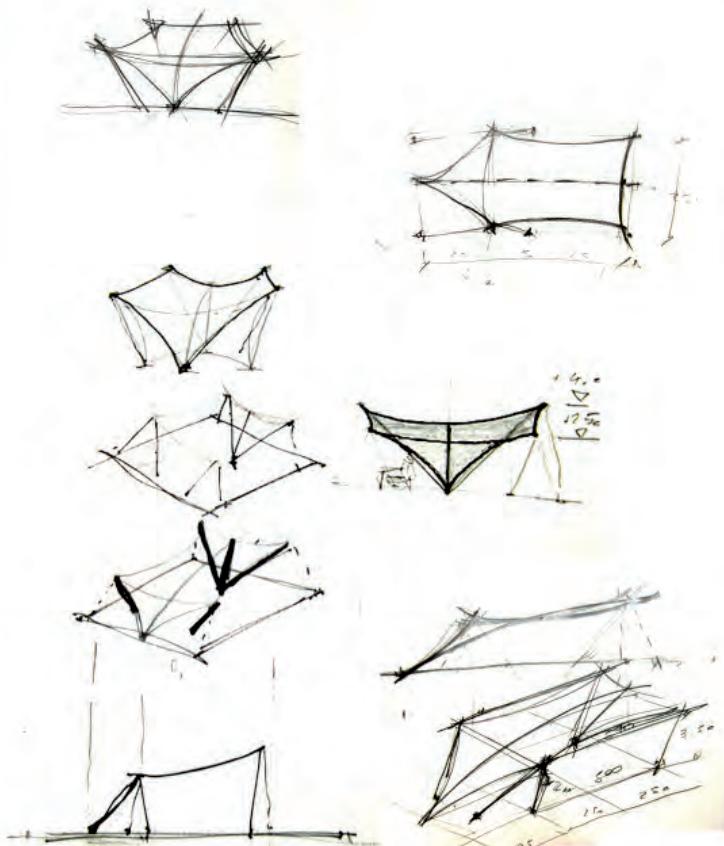


studies

A. LE POLATOUCHÉ

Julie Avons-Bariot_Dorian Halflants_Hélène Thomas_Sara Vivani_Johannes Höning

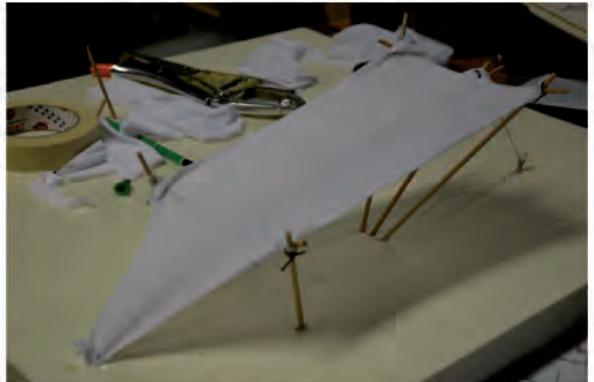




Esquisses

- choix de départ sur une structure tendue avec une double courbure allongée, plus haute d'un côté

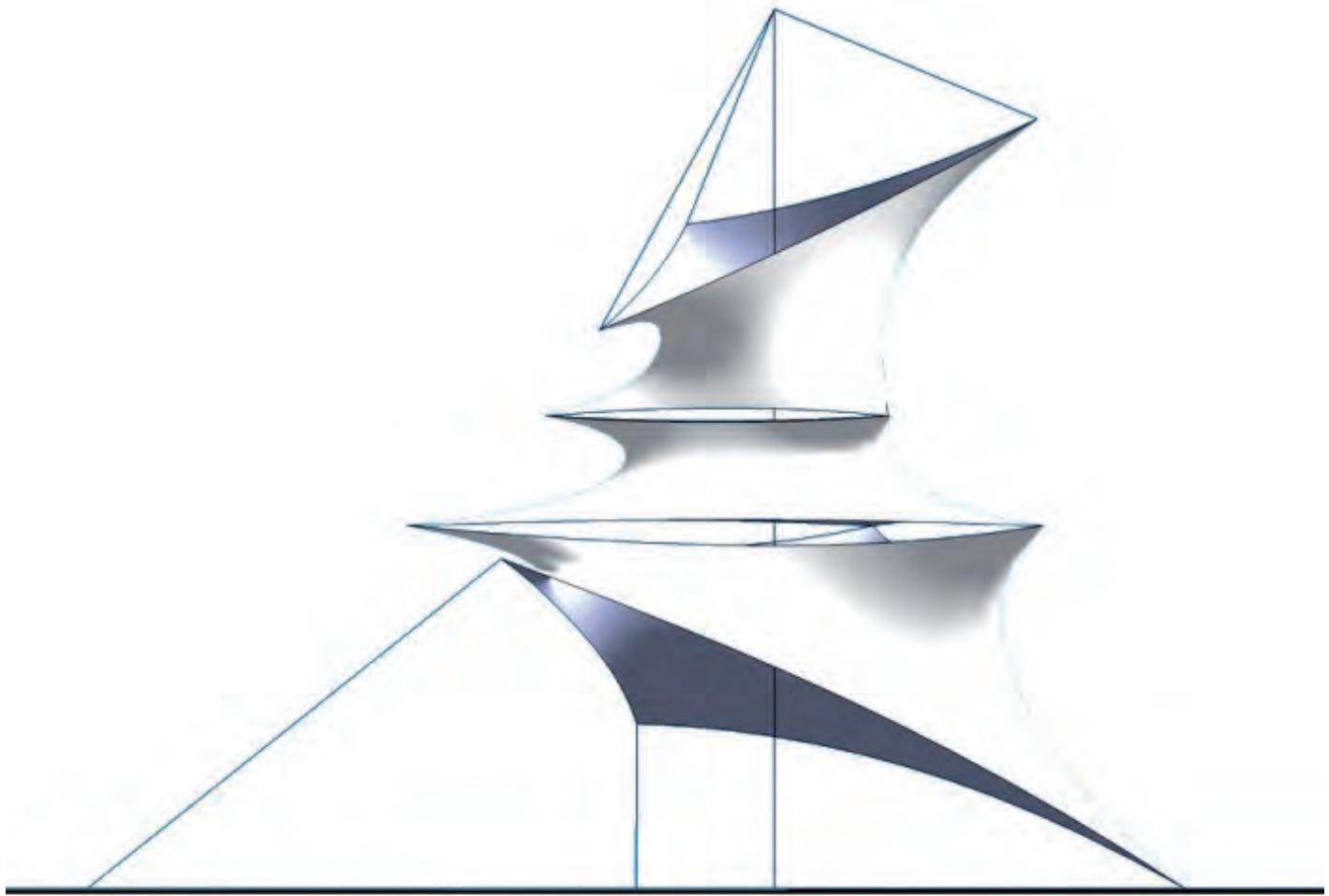
- arc central surélevé afin d'offrir une courbure supplémentaire

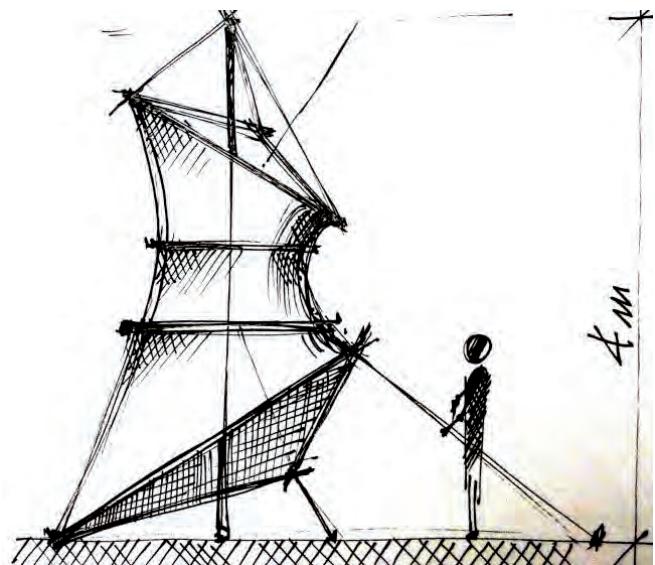
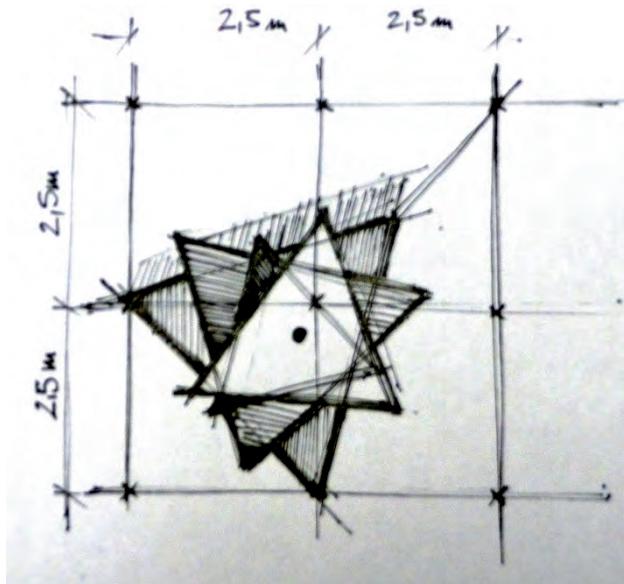


première maquette (expérimentation)

B. LA LANTERNE

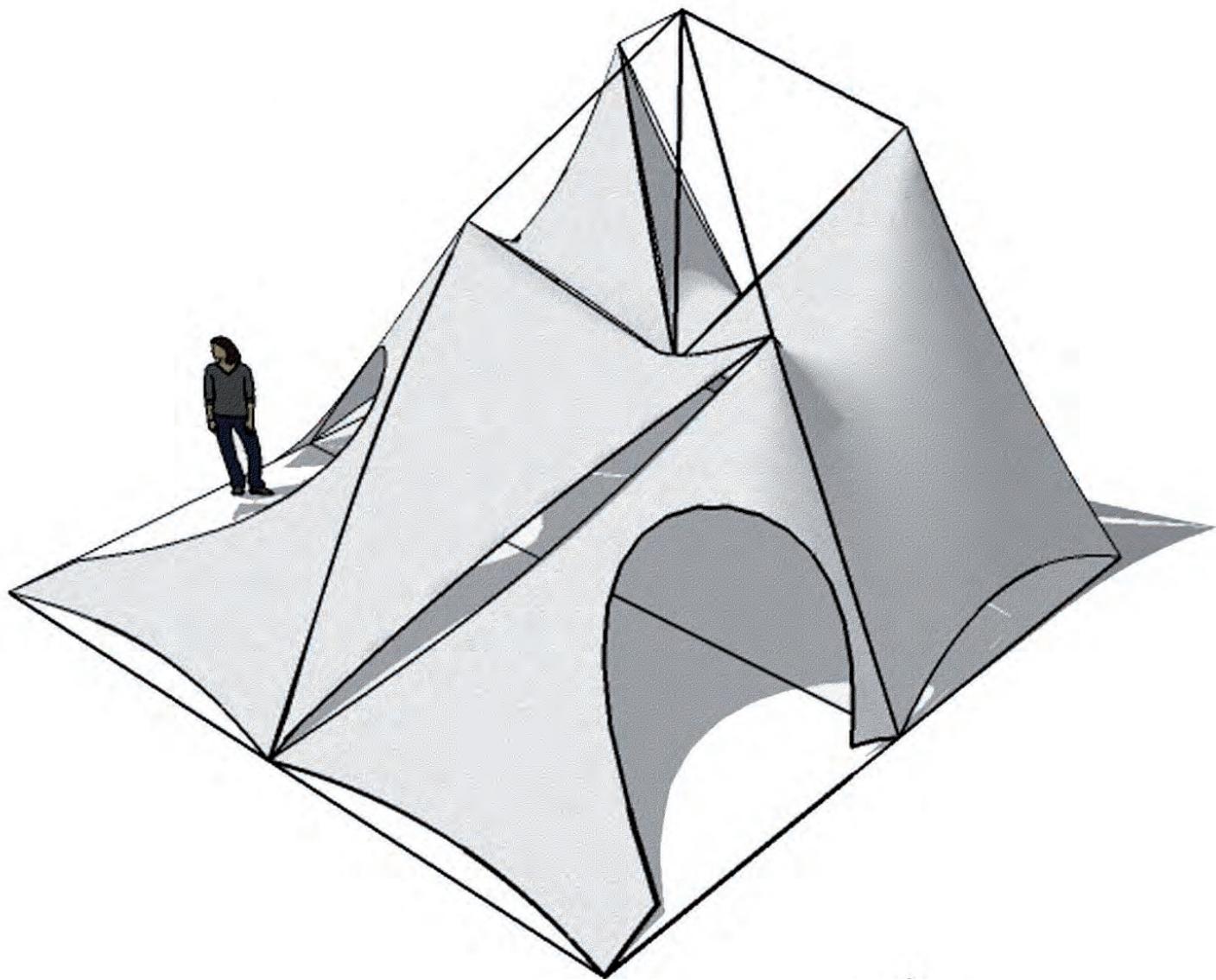
Céline Charrell_Maeva Deliry_Aurélia Marzano_Eva Winiarska_Simon Huffer

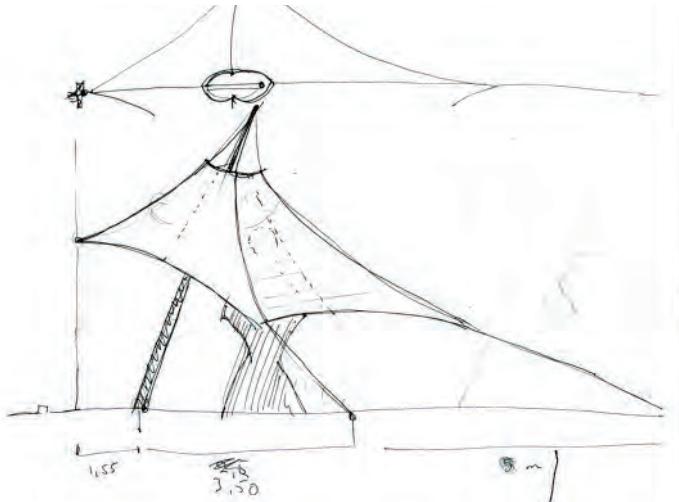




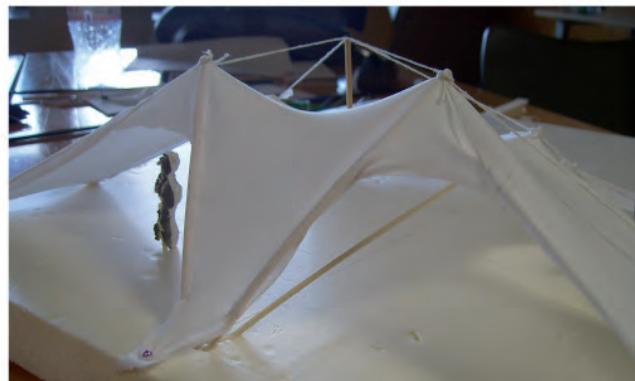
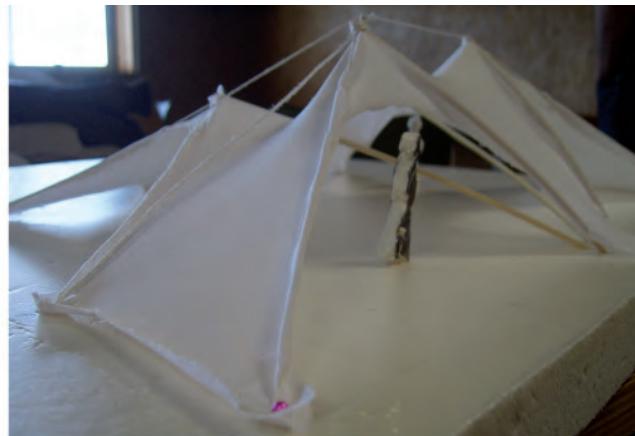
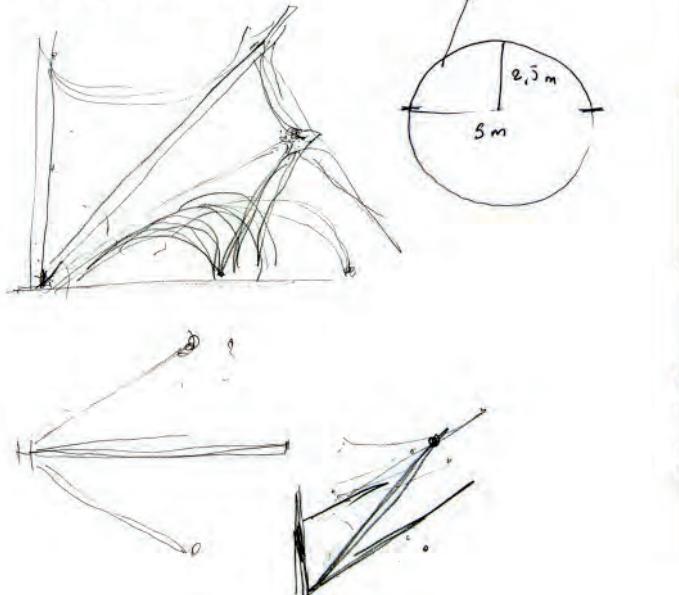
C. ALBINO BAT

Julien Duchosal_Armand Foutelet_Gewenaelle Chanot_Milène Colinet_Florian Wolbring





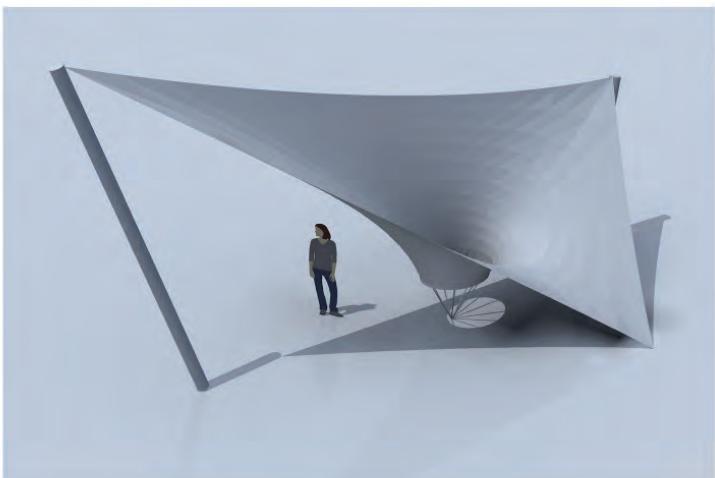
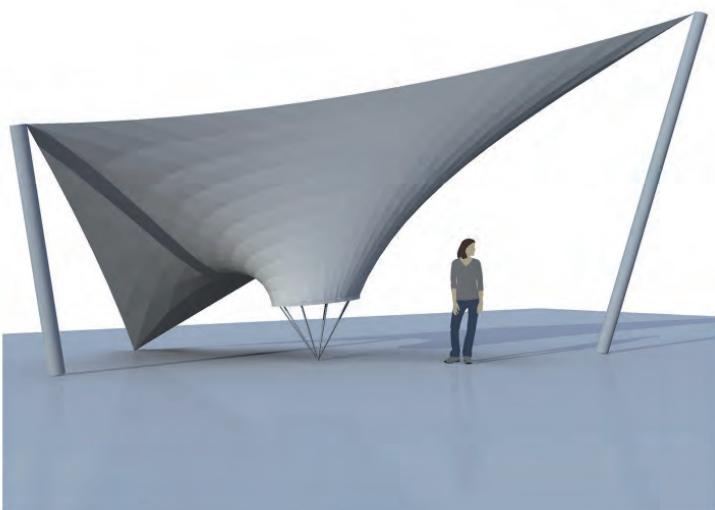
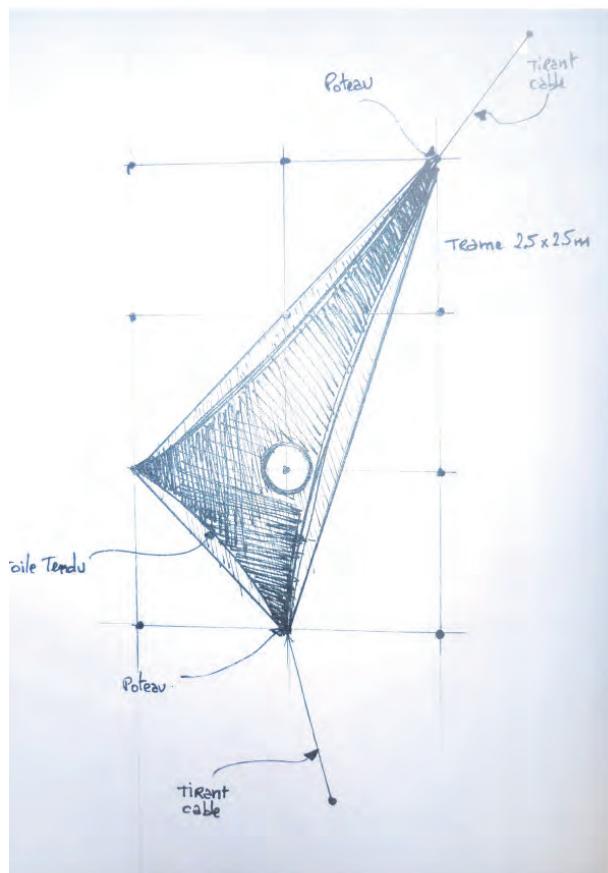
Croquis d'étude



D. OEIL DE CYCLONE

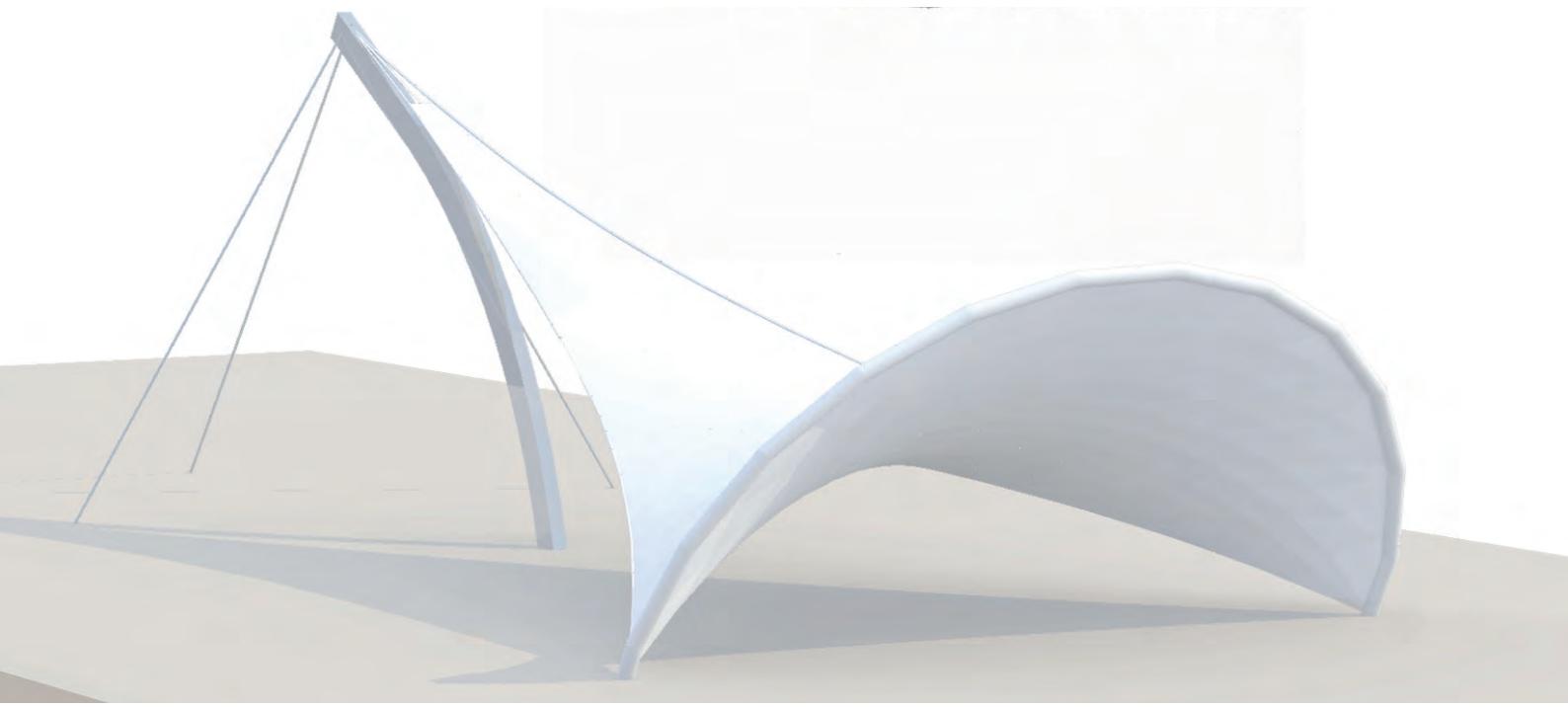
Matthieu Gamon_Yohan Gisonda_Jennifer Rein_Sylvaine Roure_Annika Andre

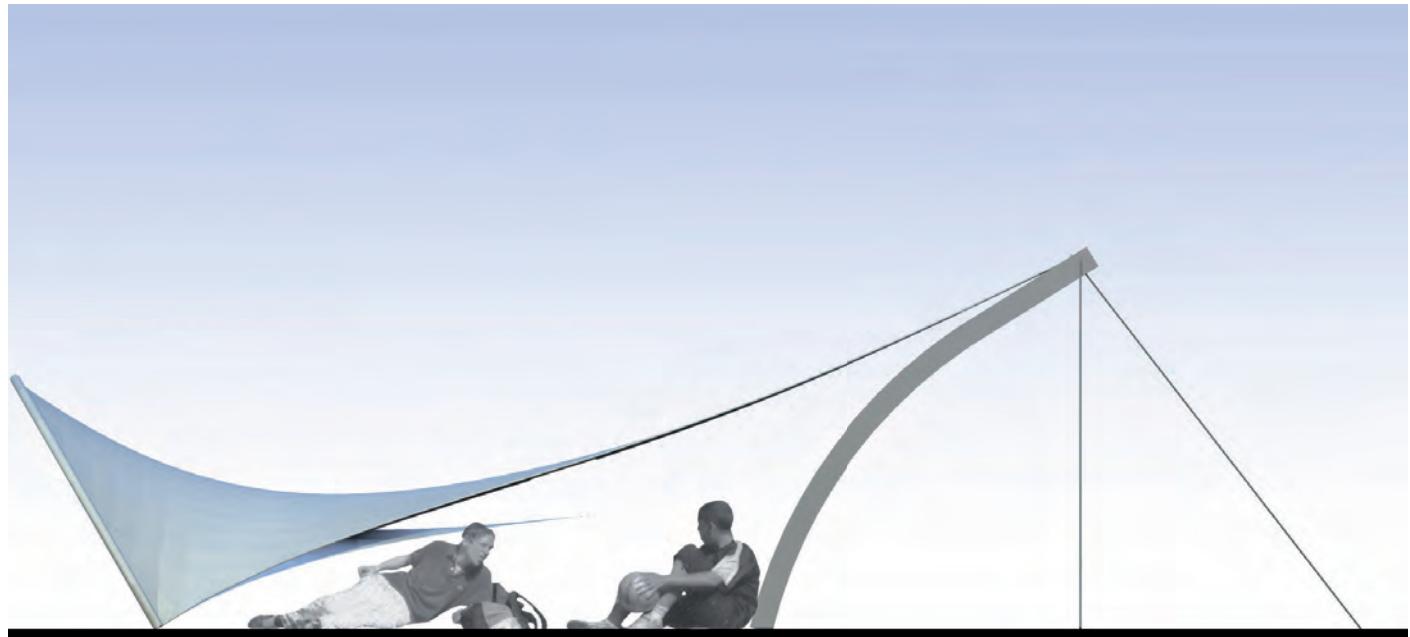
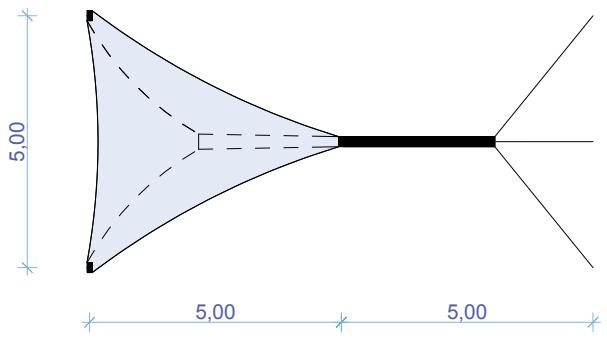
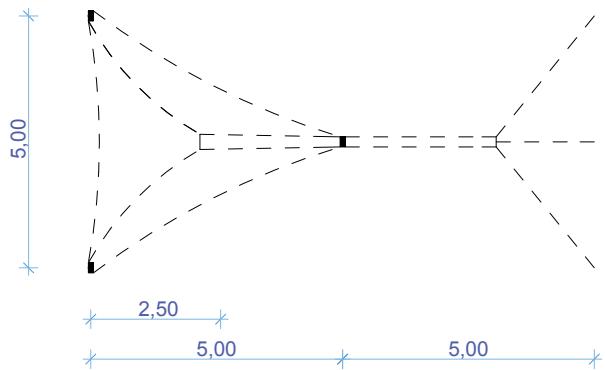




E. CORNE D'ABONDANCE

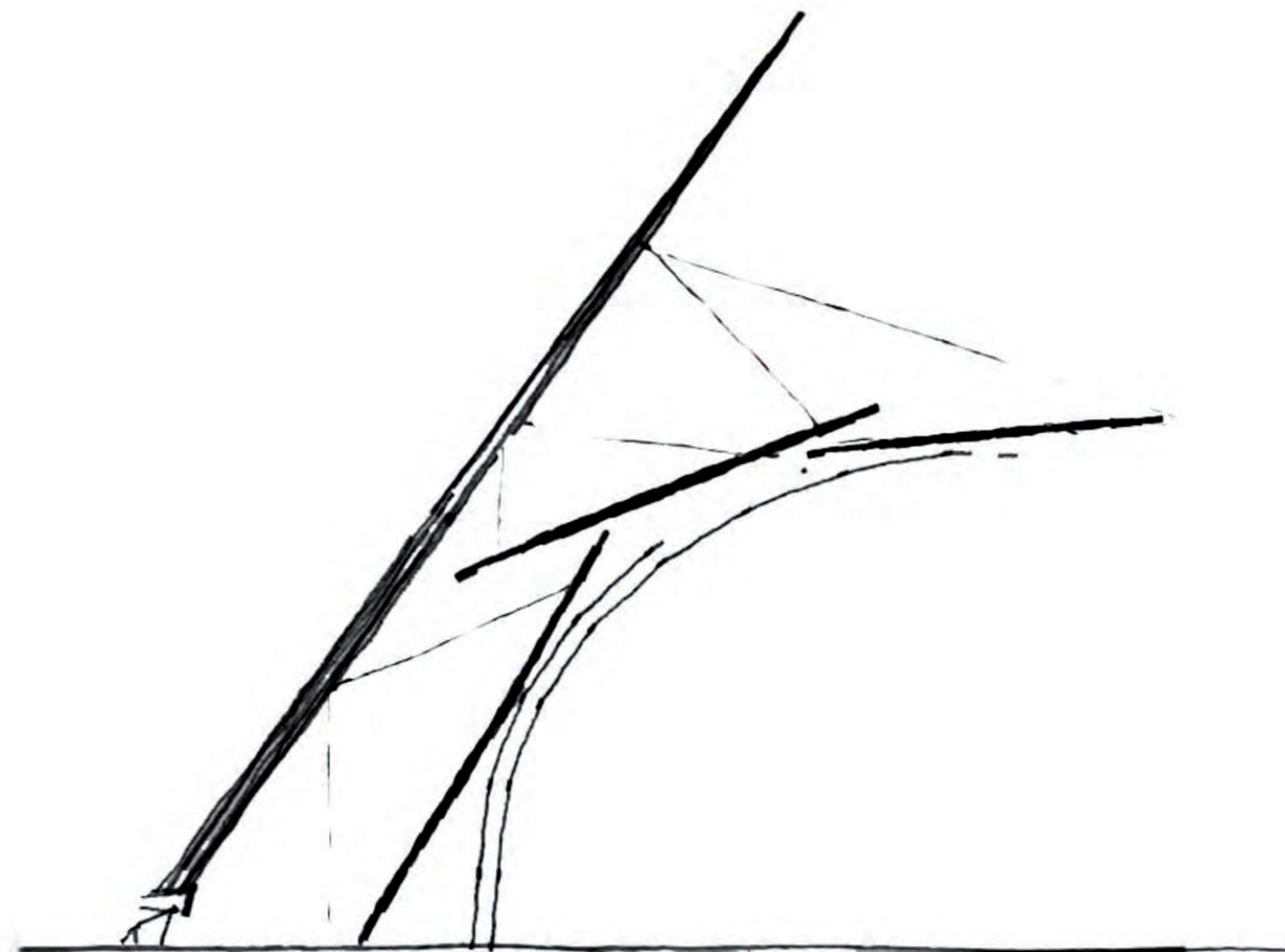
Elodie Lias_Mélodie Nicoud_Hemant Simmandree_Mélissa Brouillet_Quentin Leroij





F. L'EPINE DORSALE

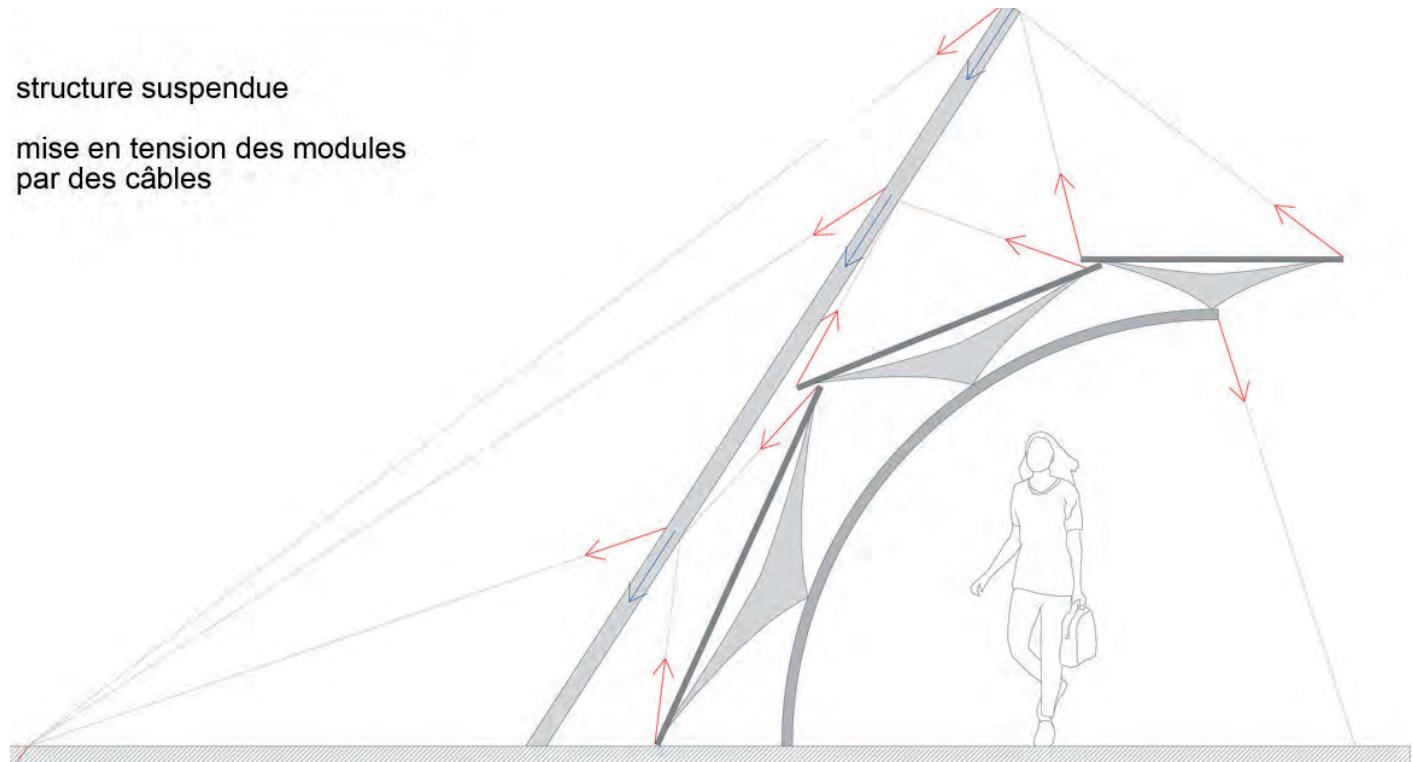
Ummuhan Ozturk_Antony Rosat_Sofiane Ouane_Clemence Aubry_Adeline Marquis





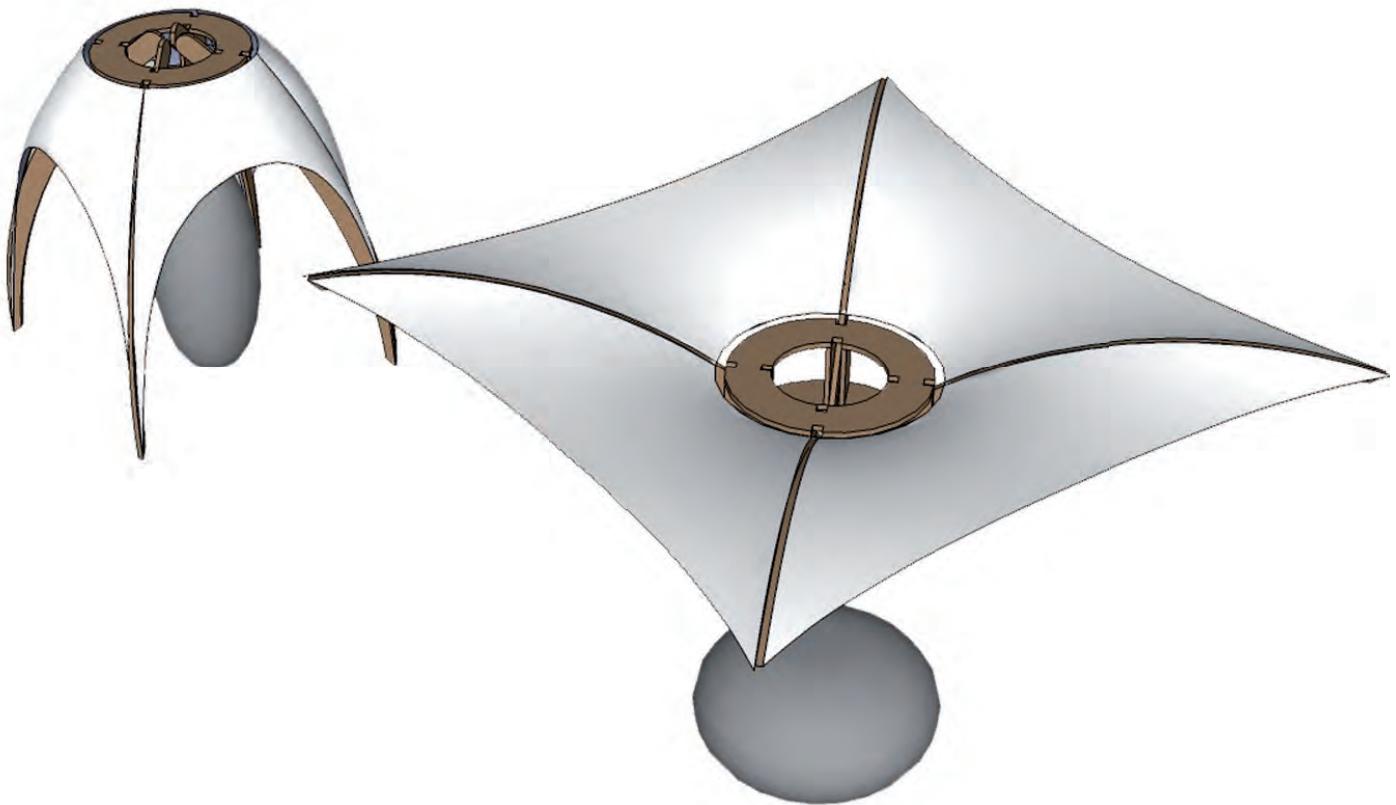
structure suspendue

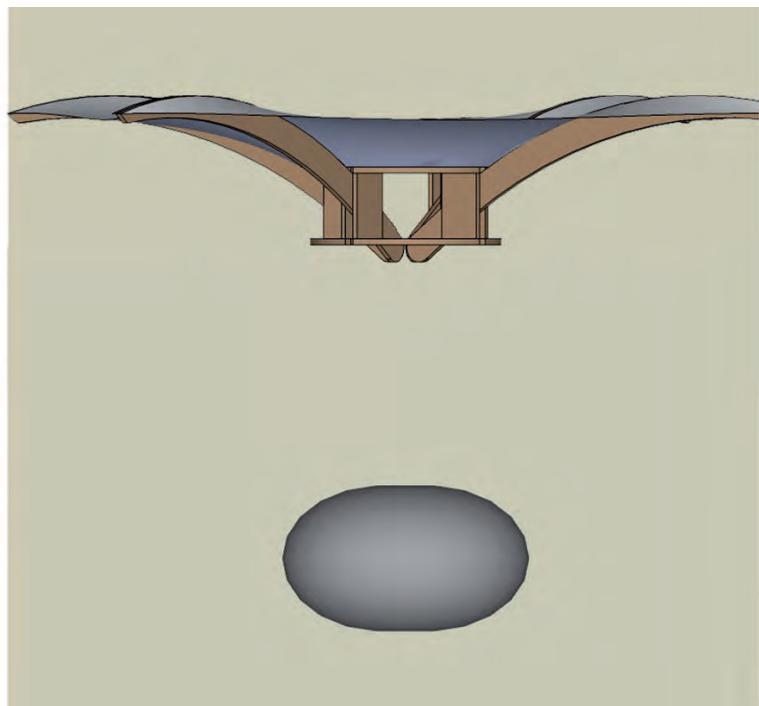
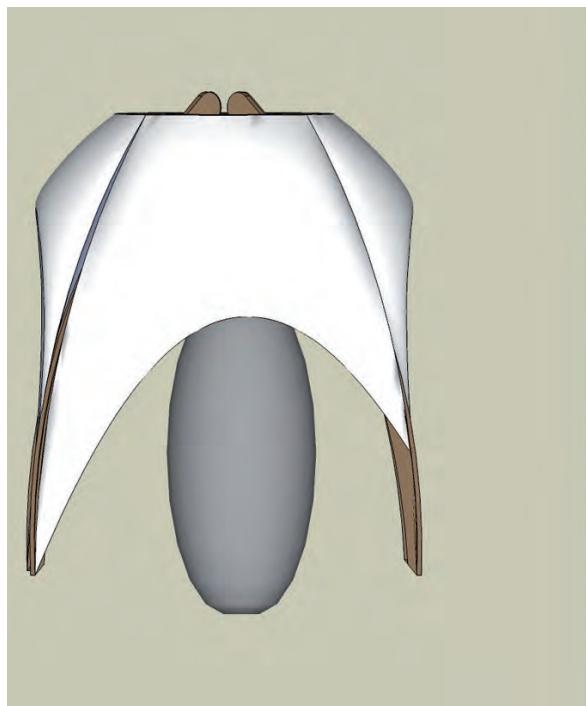
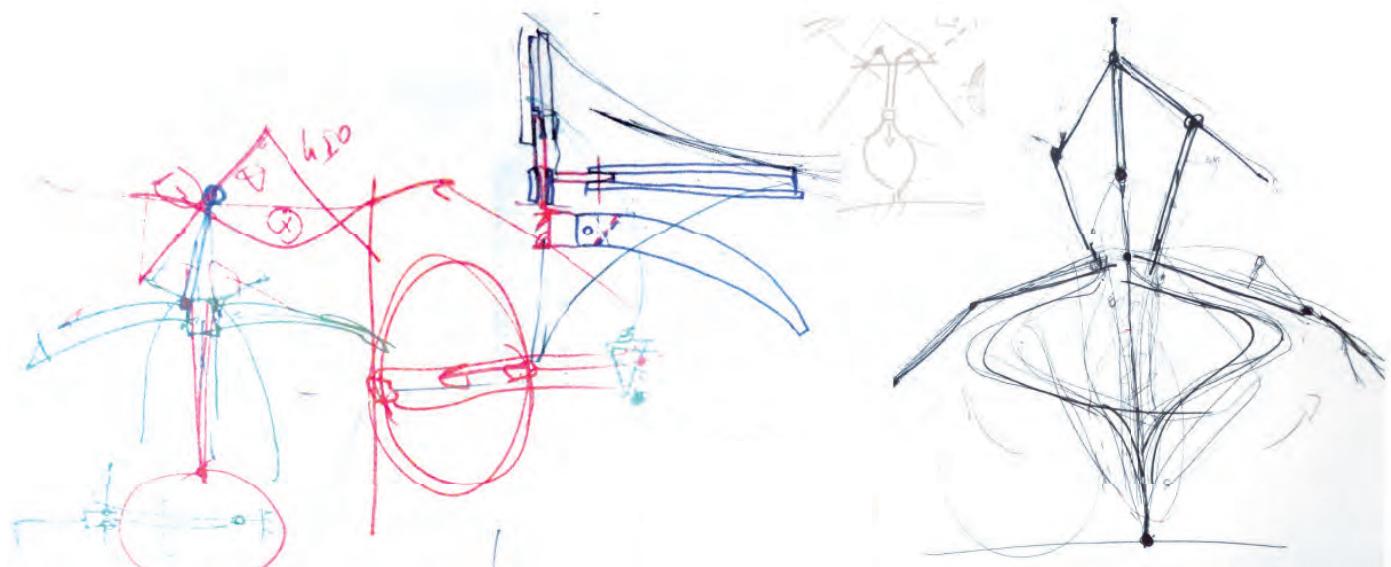
mise en tension des modules
par des câbles



G. MOVING BALL

Dora Studer_Morgane Vauchel_Julien Meyer_Léna Warhouver_Rymel Amrani





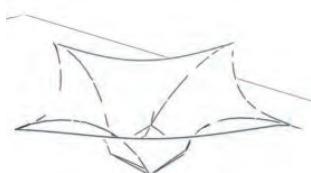
H. BLACK HOLE

Victoria Verret_Lilian Chaubet_Lynda Bensidhoum_Amina Sahli_César Bauza Lima





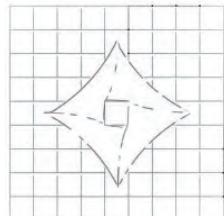
Top View



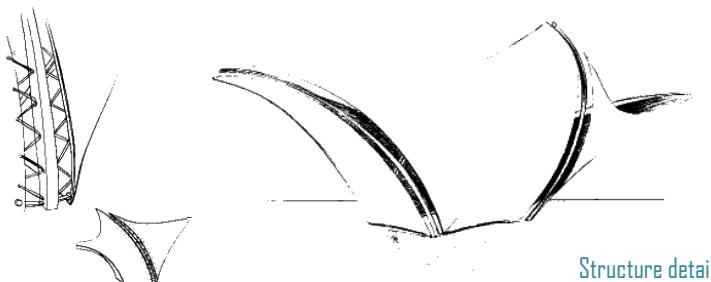
Perspective



Front View



Plan

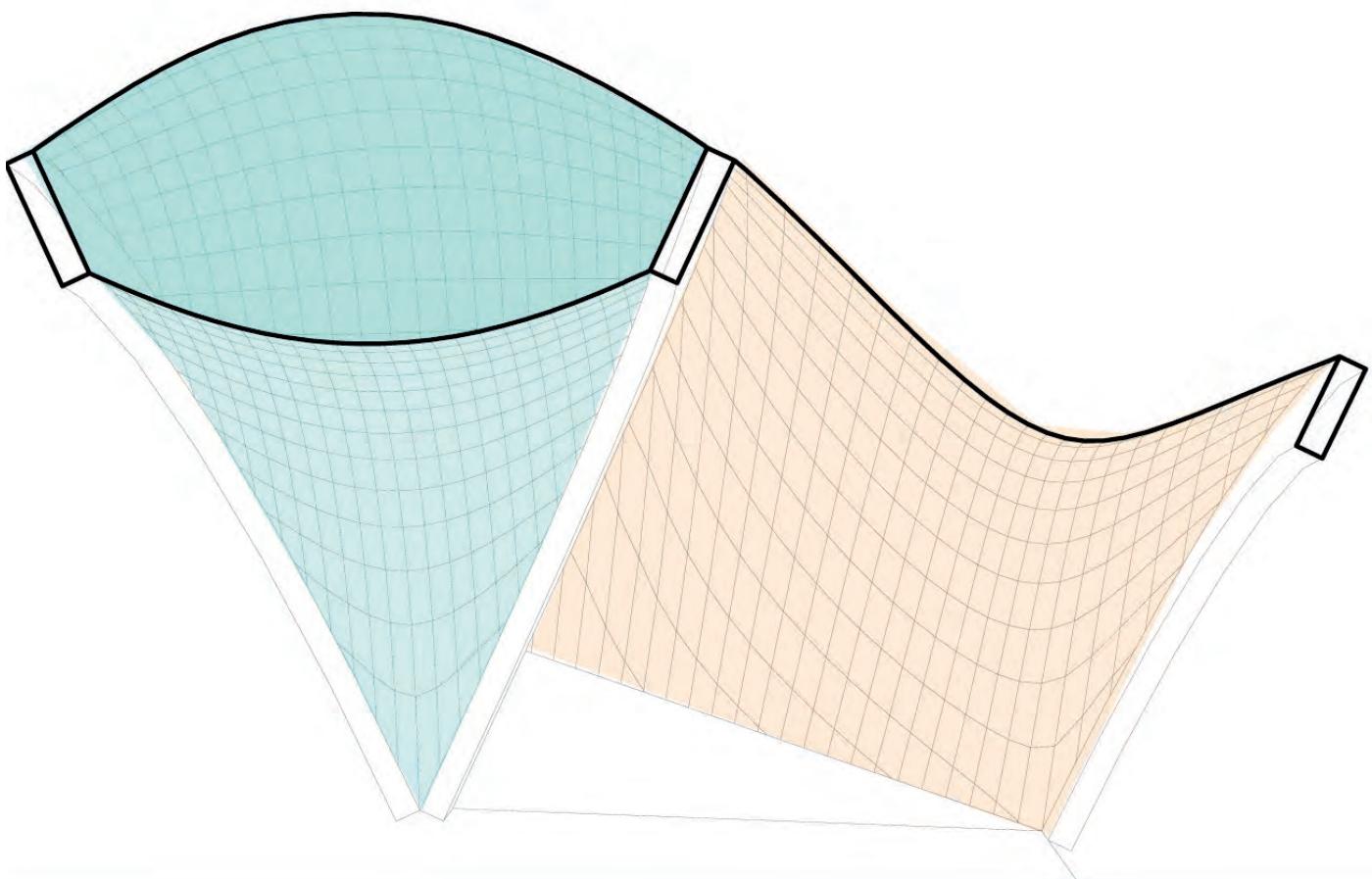


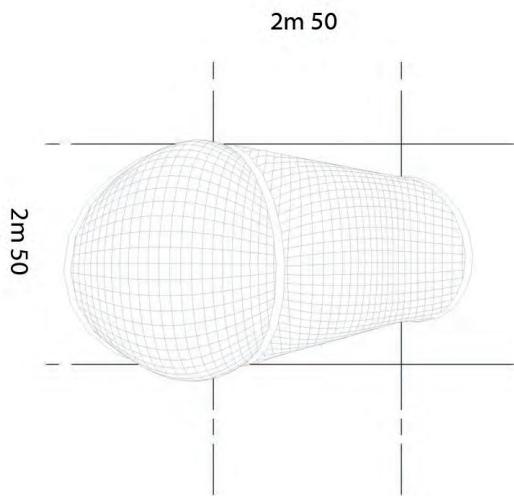
Structure detail



I. LA VAQUE

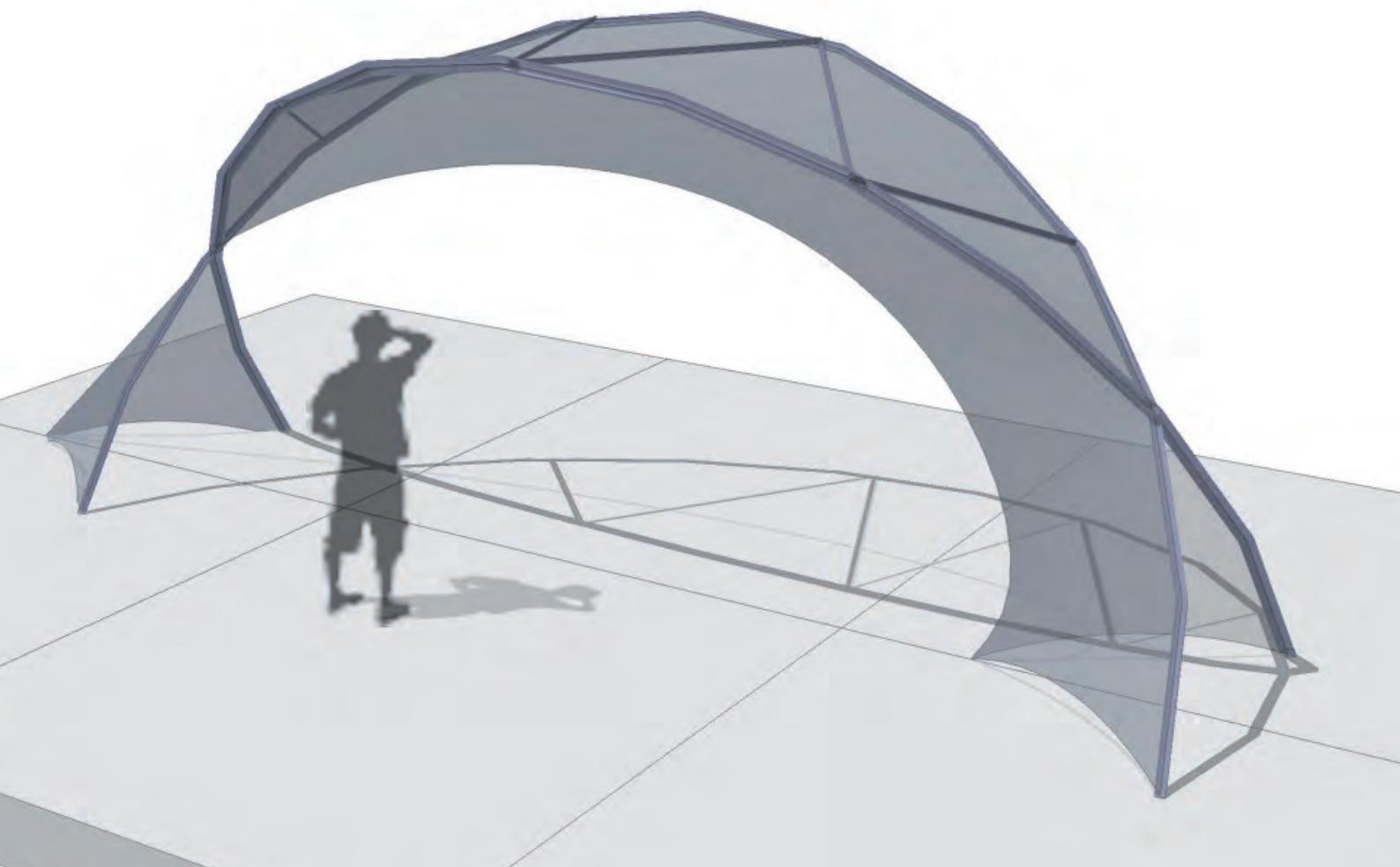
Adrien Constanst_Rachel Mark_Marcel Sewanou_Smail Batoul_Emilie Baudier





J. LE PASSAGE

Cécile Flahaux_Catherine Wright_Brice Binachon_Cécile Halbwachs_Thamer Fares Houamel





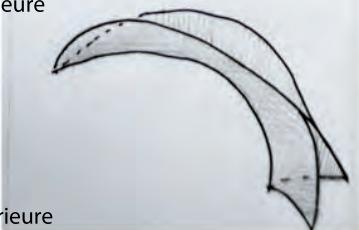
Double arc



Peau inférieure



Entraits

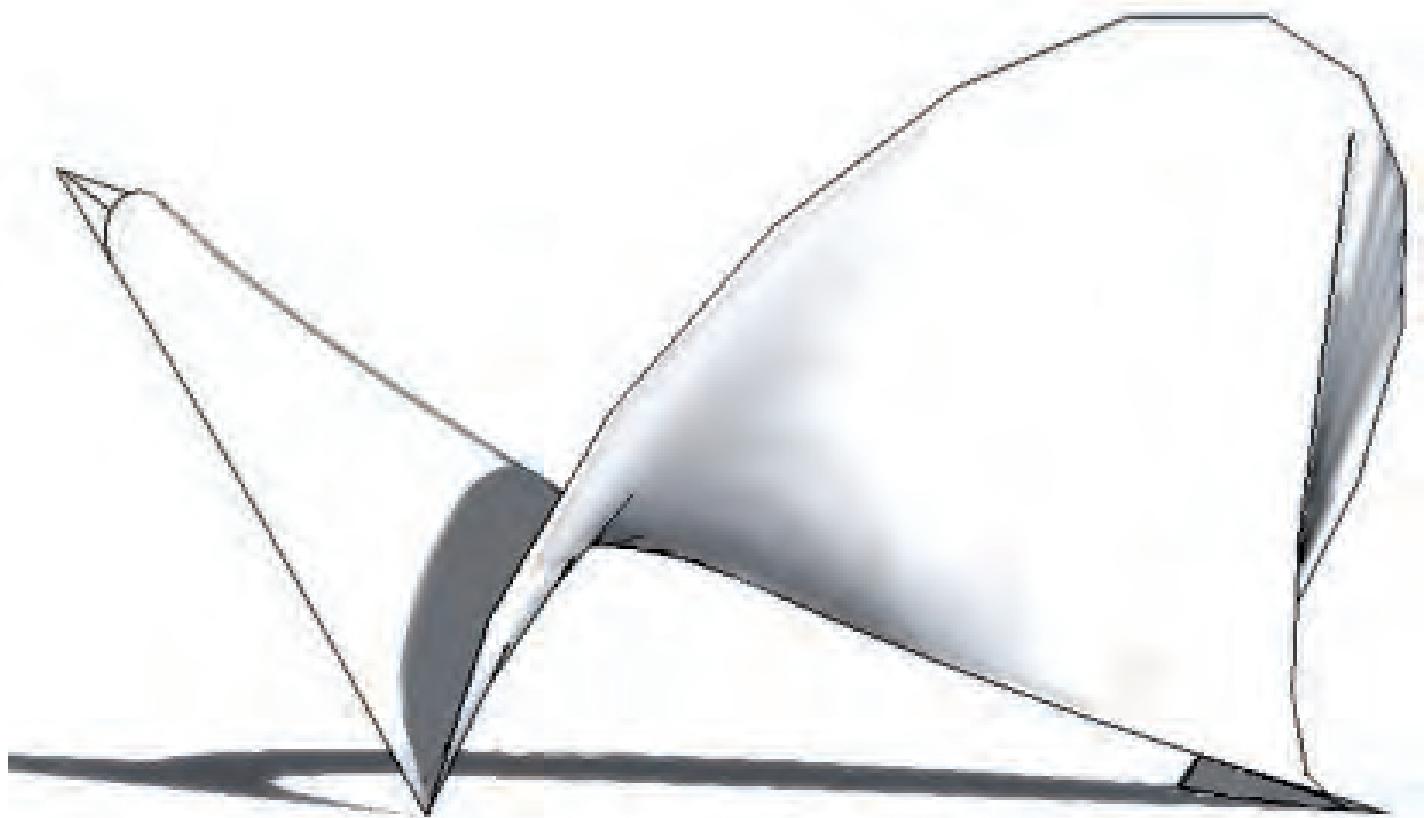


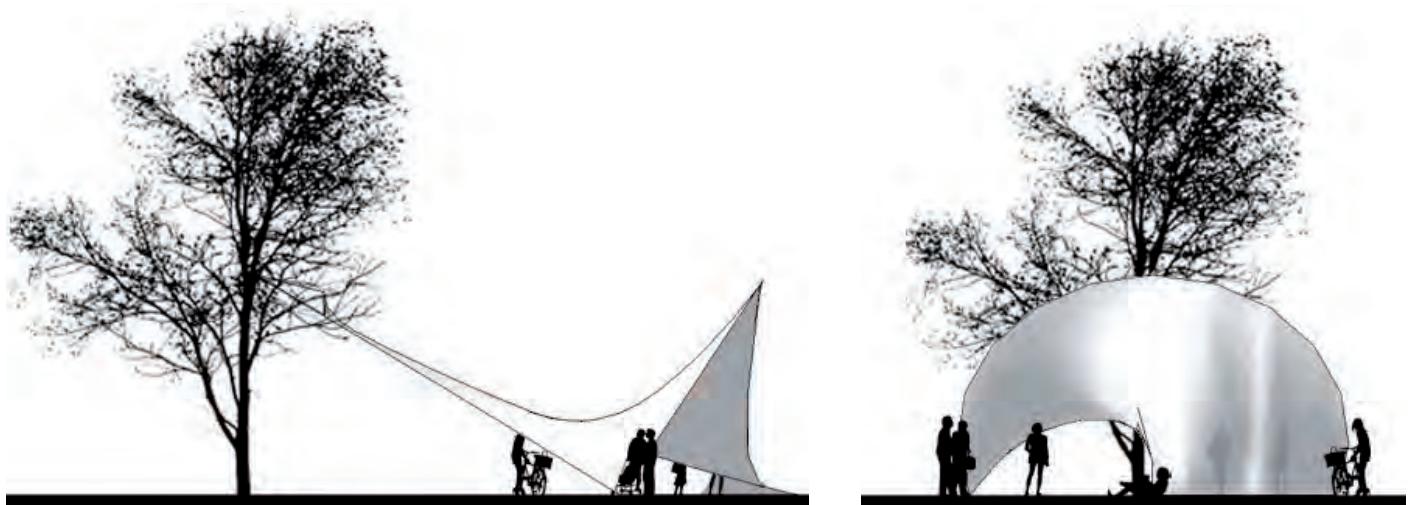
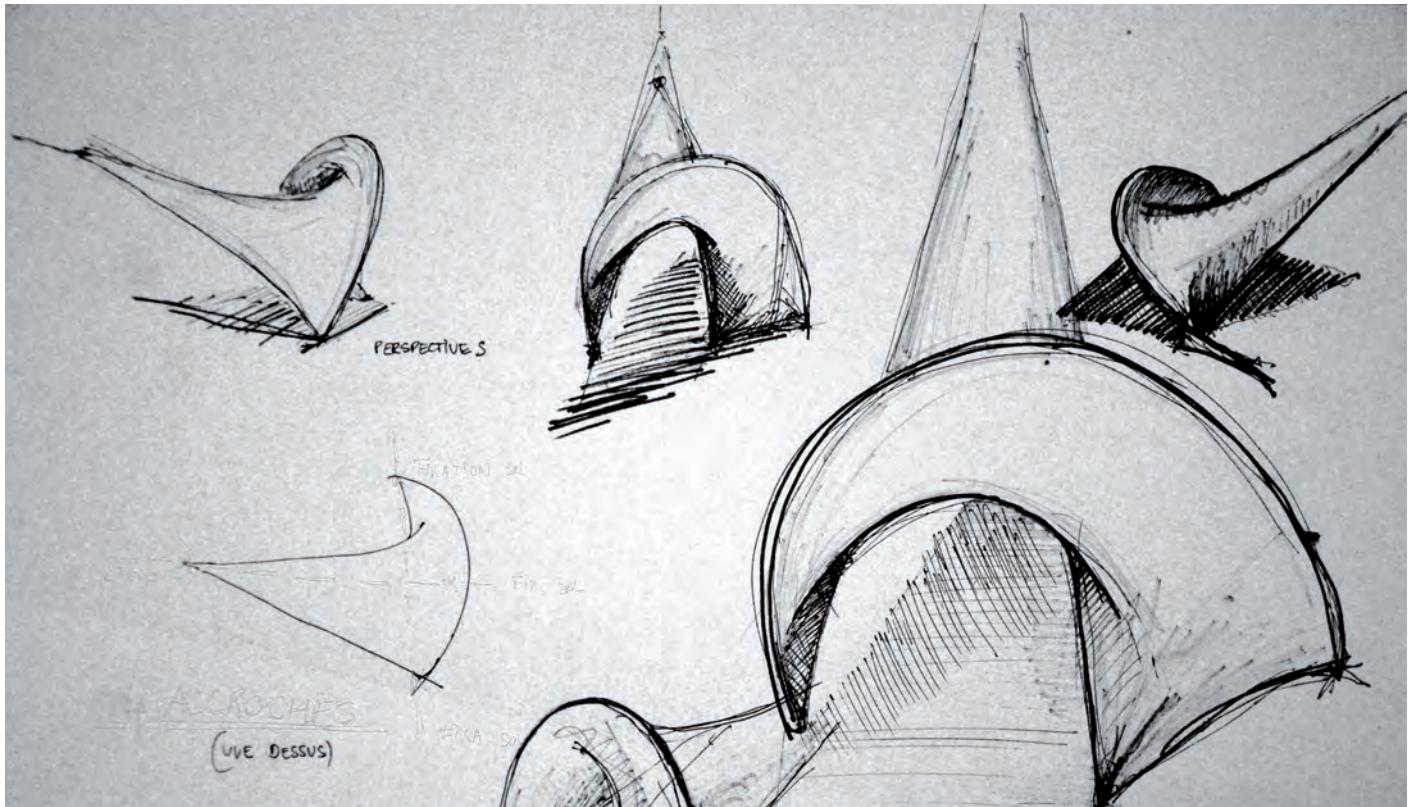
Peau supérieure



K. L' ARC TENDU

Keven Ross_Jean-Benoit Trudelle_Vanessa Kopinski_Eddy Jacquot_Jean Baptiste Peron

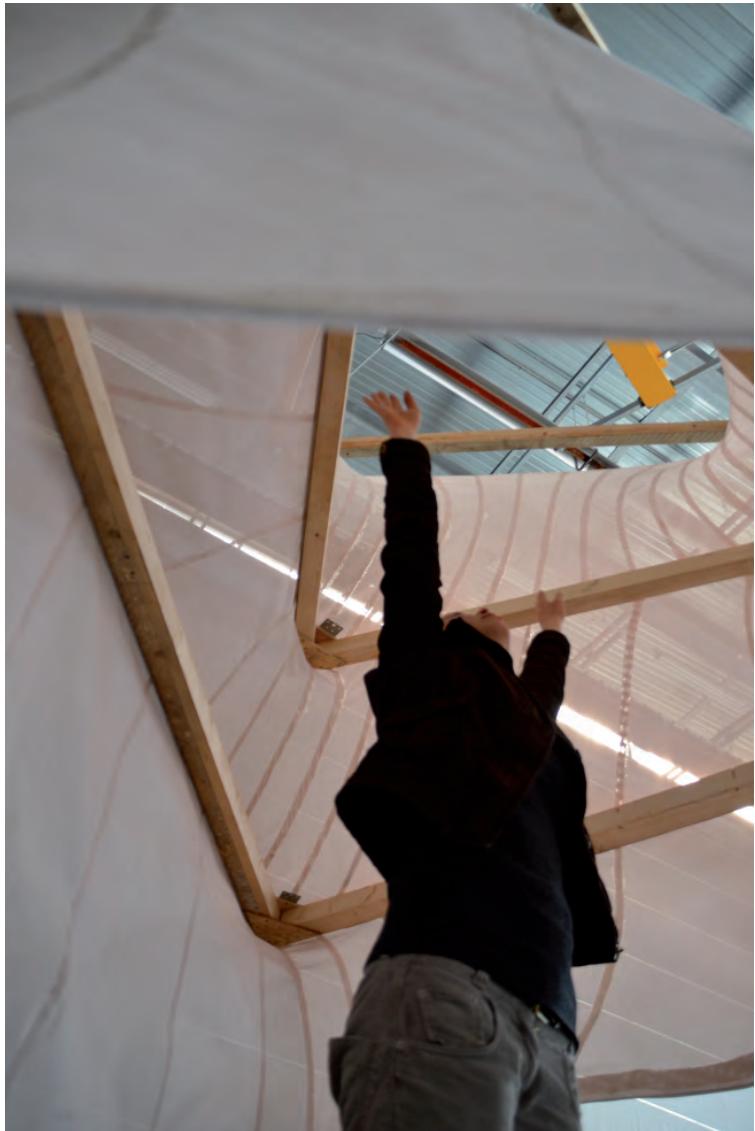




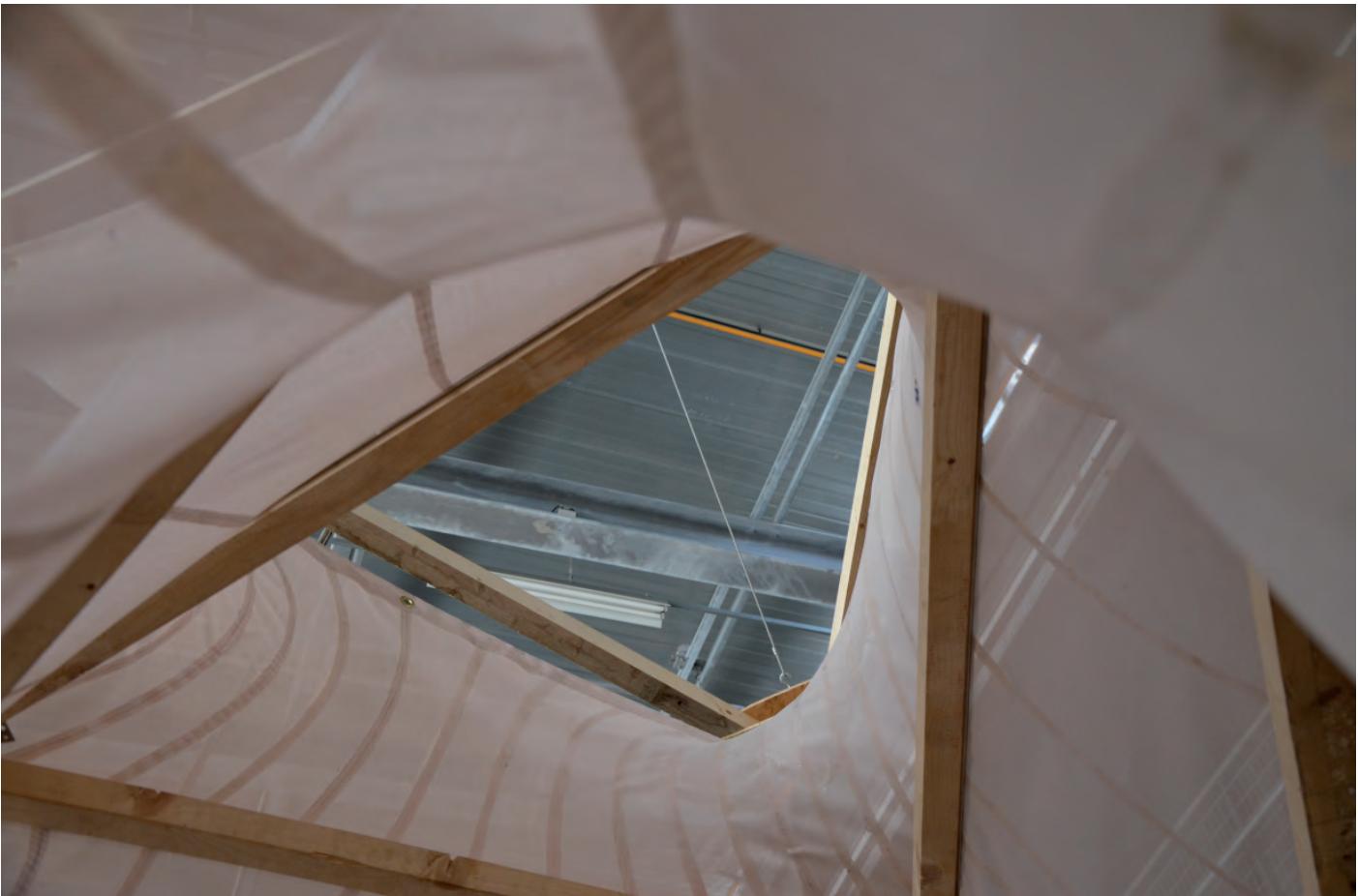
projects

LA LANTERNE

sculpture with twisted triangels





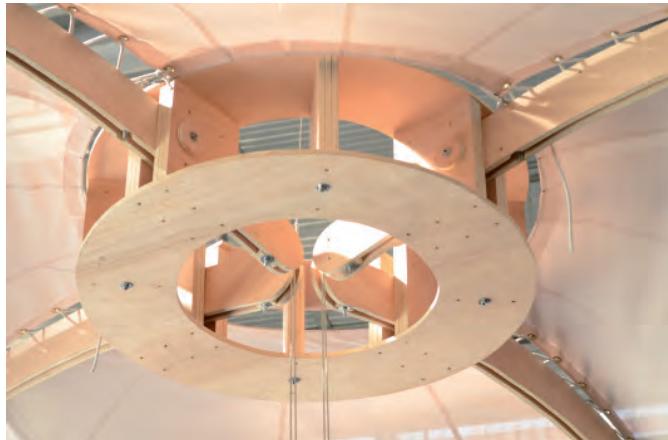


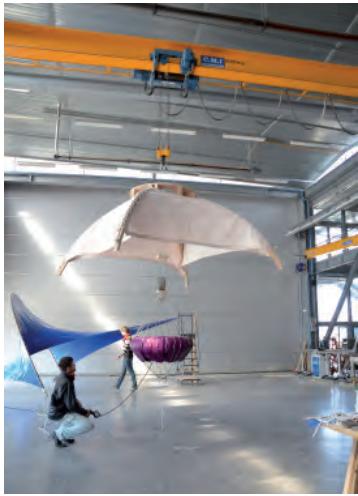


MOVING BALL

moving structure





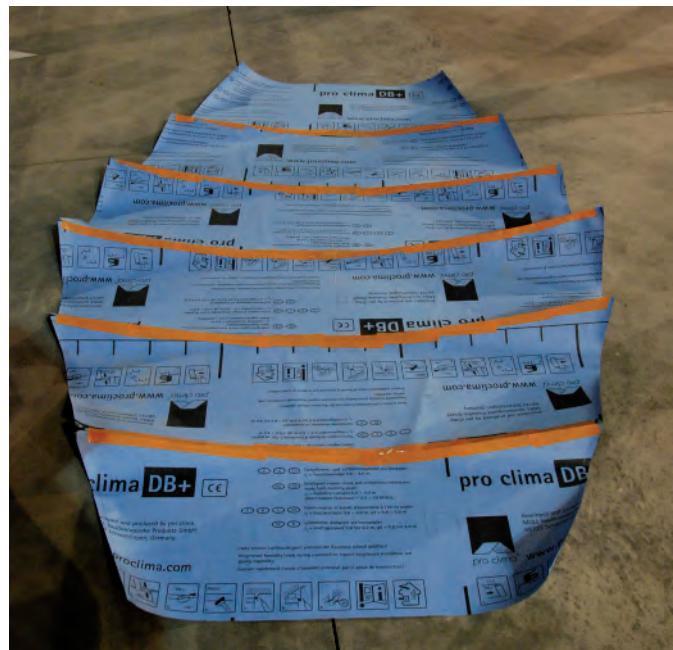
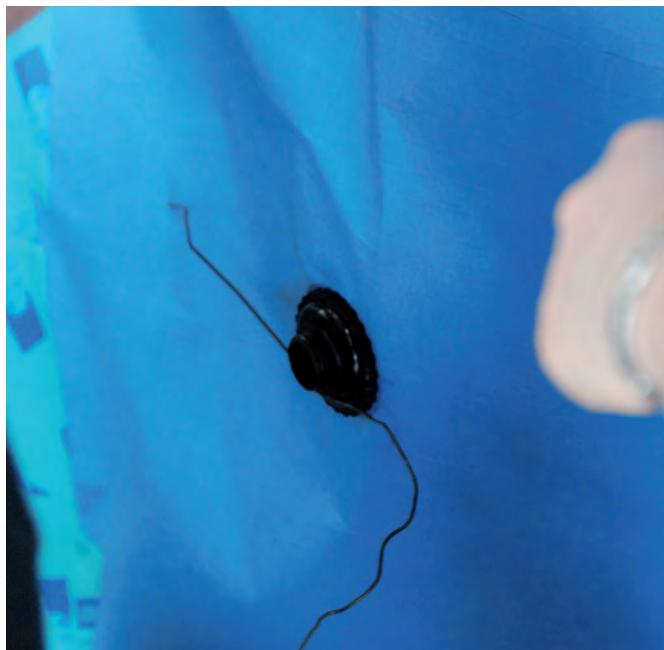




LA VAQUE

paper balloon structure





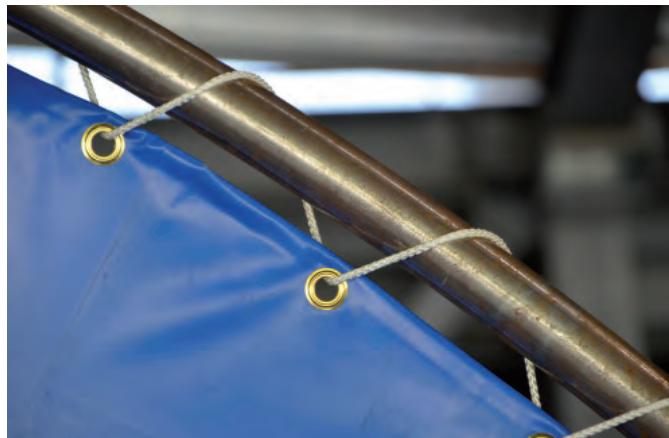
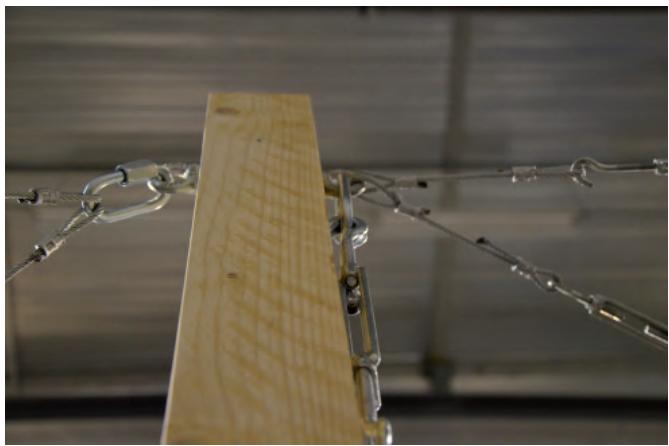
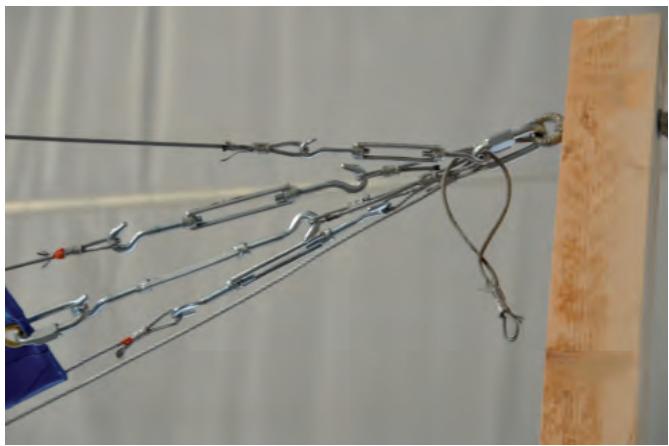
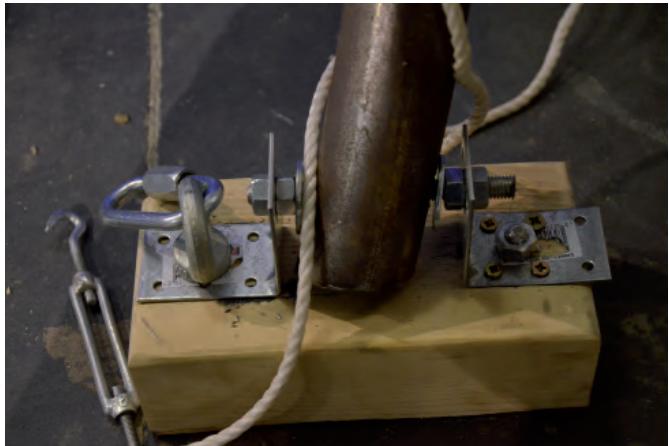
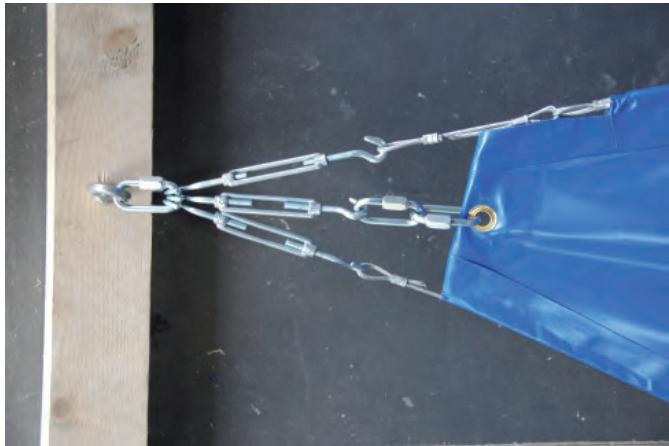




L'ARC TENDU

membrane structure with arc









imprint

editorial staff:

Prof. Dipl.- Ing. Klaus-Dieter Köhler
School of Architecture Saar at the HTW / University of Applied Sciences

layout:

Simon Huffer
School of Architecture Saar at the HTW / University of Applied Sciences

thanks to all students



