

International Students Seminar Textile Roofs 2008

Mounting

The main emphasis of the International Students Seminar is put in developing and manufacturing building models for tensioned and inflated structures, including all experience during the process of development and manufacturing up to the final and real model. The design of membrane structures is deeply related by the behaviour of the fabric and their possibility to tension, to join and to fix the materials. Therefore one of the targets of the seminar is to point out the relation between form, material behaviour and structural behaviour which can be realized during manufacturing and construction.

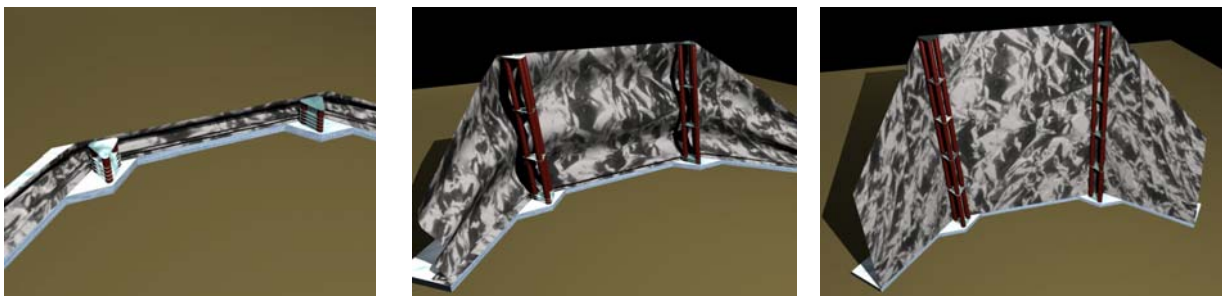
A further aim is the get practical experience in designing and manufacturing tensioned and inflated membrane structures. The practical experience is hardly to teach using computer modelling neither for the 3d-shapes and animations nor for numerical simulation of the structural behaviour. The gap between virtual designed structures and real building is getting wider and one of the aims of the international seminar is to show the possibilities and differences between physical modelling and computational design.

The advantage of inflatables and tensioned membranes are the less weight and small storage space for transportation. The construction on site is depending on the structures not that easy and needs additional scaffolding. In this seminar the focus is put on self mounting, self extracting of self inflating structures known from umbrellas, camping tents or convertible car tops. Principles of self mounting should be developed and tested.



Self opening structure (Photo: Stefan Trometer)

The design task of the seminar is inventing a self mounting tent or inflatable covering a space of 3 m² – 5 m² used as shading system. The structure has to developed in small scale models and has to be built in the scale of M 1 : 2 or M 1 : 1 during the seminar. The results especially the mounting process will be presented at the end of the workshop.



Self inflating sun shield

The project is accompanied by the lecturers of the seminar.

Lothar Gründig, TU Berlin
Peter Michael Schultes, Wien
Joachim Bahndorf, FH Minden
Rosemarie Wagner, FH München
Arno Pronk, TU Eindhoven

Location

Introduction and modelling:
Geodätenstand, 6. Stock
Technische Universität Berlin
Strasse des 17. Juni 135
10 623 Berlin

Lectures
Ernst Reuter Haus
Strasse des 17. Juni 110-114
10623 Berlin

Equipment

Paper and pencils
Notebook

Fee

150 Euro
Including social events of the Textile Roofs '08 such as
boat tour, conference dinner, beverages during the day and
materials to build the models

Accommodation

on the homepage www.textile-roofs.com will be a list of
Guesthouses and hotels, the students have to organize their
accommodation by themselves

Registration

on the homepage www.textile-roofs.com you will find a
registration form for the International Students Seminar in the
section "Stud. Seminar". The registration should be send
together with a copy of your student identity card by fax or mail
to Mr. Bernd Stary
University of Technology Berlin
Skr. H20
Straße des 17. Juni 135
10623 Berlin
Germany
Fax: +49 30 31421119

Program

Tuesday, May 20th

- 09.30 - 10.00 Welcome and Introduction, Prof. Lothar Gründig, TU Berlin
- 10.00 - 10.45 Presentation of the lectures, Prof. J. Bahndorf, Minden
- 10.45 - 11.30 Presentation of the task, Prof. R. Wagner, München
- 11.30 - 13.00 Introduction in the topic, the materials, working techniques and equipment, Peter Michael Schultes, Wien
- 14.30 - 18.30 Conceptual design
Experiments with stiffening effects

Wednesday, May 21th

- 09.00 - 13.00 First models of the cover
- 14.30 - 18.30 Detailing of the model
Recognizing and understanding of the stiffening effects

Thursday, May 22th

- 09.00 - 11.00 Presentation of the models and discussion with the lectures
- 11.00 - 13.00 Revision of the models
- 19.30 Special Guest Lecture
(Ernst Reuter Haus)

Friday, May 23th

- 09.00 - 12.30 Lectures Textile Roofs 2008 (Ernst Reuter Haus)
- 14.00 - 16.00 Refinement of the models
- 16.30 - 19.30 Boots tour, river Spree
- 19.45 Conference dinner, Textile Roofs 2008

Saturday, May 24th

- 09.00 - 12.30 Lectures Textile Roofs 2008 (Ernst Reuter Haus)
Finishing of the models
- 14.30 - 16.00 Presentation and evaluation of the models