



# 2018 China-Germany Workshop on Modern Membrane Structures

20-22 October, Shanghai

## Third Announcement



EMBRANE  
STRUCTURES

# INNOVATION & PRACTICE



China Steel Construction Society  
Association for Spatial Structures



上海交通大學

SHANGHAI JIAO TONG UNIVERSITY



Karlsruher Institut für Technologie



# China-Germany Workshop on Modern Membrane Structures

## **Third Announcement | China-Germany Workshop on Modern Membrane Structures**

**20-22 October 2018 Shanghai, China**

### **Theme: Membrane Structures: Innovation and Practice**

China-Germany Workshop on Modern Membrane Structure will take place in Shanghai, China on 20-22 October, 2018. Jointly initiated by Professor Wagner at Karlsruhe Institute of Technology and Professor Wujun Chen at Shanghai Jiao Tong University, this workshop is not only for academic field, but also for engineering field. The topic of this workshop focuses on innovation and practice of membrane structures.

### **Goals**

This is an amazing opportunity for participants from different research institutions and engineering company in Germany and China to exchange the achievements of materials, building production, technologies and applications, and to promote innovation and development of membrane structures. We are sure this workshop will be a marvelous open door for all participants to express their thoughts and encourage more collaboration among researchers and engineers taking an interest in this field.

### **Objectives**

With a combination of flexibility, high strength-weight ratio, recyclability and economic efficiency, membrane structures have represented an attractive option for many large-span buildings in recent decades. Greatly facilitated by modern technology, novel materials related to building membrane are developed to satisfy the requirements of reducing energy consumption in architecture industry, such as ETFE, flexible thin film photovoltaics, durable fabric film, aerogel thermal film, corrosion resistant film, etc. Innovation of membrane materials boosts development of new types of membrane structure, which in turn brings new theoretical and technical problems.

Therefore, the principle objectives of this workshop are to identify the prior directions for research and development in the field of membrane structure and then to explore new solution to promote upgrade of architecture industry in Germany and China, as well as to enhance the technological and cultural communications.

## Topics

Our Workshop will provide a perfect platform addressing:

- 1) Innovation and development of membrane materials
- 2) Innovation and development of membrane buildings
- 3) Innovation and development of membrane structures

To make all potential participants have a rough understanding of the theme of this workshop, all the presentation topics of invited speakers are attached here for reference.

No.	Title	Name	Presentation Topics
1	Prof/Ph.D.	<b>Rosemarie Wagner</b>	<i>Recent development and challenge of PV/T integrated tensioned structures</i>
2	Prof/Ph.D.	<b>Kai-Uwe Bletzinger</b>	<i>CAD-FEM integrated design and fluid-structure-interaction of large membrane structures.</i>
3	Prof/Ph.D.	<b>Natalie Stranghöner</b>	<i>Influence of weathering on the mechanical properties of PVC-coated polyester fabrics</i>
4	Prof/Ph.D.	<b>Thomas Stegmaier</b>	<i>Textile-based collector with integrated latent heat storage for solar thermal energy use</i>
5	Prof/Ph.D.	<b>Ken'ichi Kawaguchi</b>	<i>New Topics of Membrane for Architectures</i>
6	Prof/Ph.D.	<b>Peter Gosling</b>	<i>Recent development of advanced design and analysis of tensile membrane structures</i>
7	Ph.D.	<b>Carl Maywald</b>	<i>Aspects of the Material Performance of ETFE in Tensile Membrane Structures</i>
8	Ph.D.	<b>Dieter Strobel</b>	<i>Powerful Tools for Formfinding, Statics and Patterning of Pneumatic Structures</i>
9	Ph.D.	<b>Bjoern Christian Beckert</b>	<i>Designing with ETFE</i>
10	Ph.D.	<b>Francoise Fournire</b>	<i>Innovative Flexible composite Material for Tensile Architecture</i>
11	Prof/Ph.D.	<b>Guest speaker</b>	<i>To be confirmed later</i>

12	Prof/ Ph.D.	<b>WU Yue</b>	<i>Methodology and experiments for understanding ice-membrane structures</i>
13	Prof/Ph.D.	<b>YANG Qingshan/ WANG Tengfei</b>	<i>Numerical simulation of unsteady aerodynamic characteristics of long-span roofs and analytical study of a circular membrane in contact with a rigid substrate</i>
14	Prof/ Ph.D.	<b>WU Minger</b>	<i>Nonlinear structural model and design methodology of ETFE structures</i>
15	Prof/Ph.D.	<b>XUE Suduo</b>	<i>Development and prospects of membrane structures in China</i>
16	Prof/Ph.D	<b>CHEN Zhihua</b>	<i>Development and application of cable structures and emerging scientific problems</i>
17	Prof/Ph.D.	<b>CAI Jianguo</b>	<i>Deployment Simulation of origami-based deployable membrane structures</i>
18	Prof/Ph.D	<b>GONG Jinghai/QING Qiang</b>	<i>Structural behavior and related safety issues of air-supported structure subjected to deflation</i>
19	Prof/Ph.D	<b>ZHU Zhongyi</b>	<i>Design experiences of series of large span membrane structures</i>
20	Prof/Ph.D	<b>XIAO Long</b>	<i>R&amp;D and design of large span industrial air dome storage facility</i>
21	Prof/Ph.D	<b>CHEN Wujun</b>	<i>Recent progress of biaxial tensile/shear/tear/strength mechanical behavior of fabric membranes</i>

## Venue &Accommodations

The workshop will be held on **Minhang campus of Shanghai Jiao Tong University** (Address:800 Dongchuan Road, Minhang, 200240 Shanghai, China).and 40-minutes from Shanghai Hongqiao International Airport.

Accommodations will be arranged at Huhua International Hotel (Address: 368 Jianchuan Road, Minhang, 200240 Shanghai, China). Shuttle buses will take the participants directly to the venue in the morning and back in the evening.



## Important dates

On spot registration: 19 October, 2018

Workshop: 20-21 October, 2018

Technical visit: 22 October, 2018

## Registration

Note that Online registration is not available for this workshop, please fill in and submit the registration form to Email: [sjtussl@gmail.com](mailto:sjtussl@gmail.com) before **8 October 2018**. You will receive a confirmation within a few days of your registration. If we receive more applications than the conference capacity, we may have to limit participation. Upon confirmation of your registration, we advise you to contact the **Huhua International Hotel (86 021-6450 8999)** and to book your room as soon as possible, due to high demand in Shanghai during this time.

### Download registration form from:

<https://pan.baidu.com/s/1FPhk7w1EJvYi-20v0wk2fw>

Academic registration: 320Euros

Student registration: 180Euros (Please carry student identification cards during registration)

On spot registration will be opening on October 19, 2018 (9:00-20:00) at Huhua International Hotel. You can pay the registration fee by cash or credit card (Visa or Mastercard).

## About hosting organizations and sponsors

### Hosting organizations:



上海交通大学  
SHANGHAI JIAO TONG UNIVERSITY

*Shanghai Jiao Tong University*



Karlsruhe Institute of Technology

*Karlsruhe Institute of Technology*

### Co-organizer



China Steel Construction Society  
Association for Spatial Structures

*Association for Spatial Structures, China Steel Construction Society*

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**Mail us to know more!**

More information about the workshop will be released gradually in next few months, so stay tuned for further updates and announcements. Please contact us in time if you want to know more about this workshop. Drop us query with details and we shall contact you right away.

E-mail: [sjtussl@gmail.com](mailto:sjtussl@gmail.com)