

XII International Conference on Textile Composites
and Inflatable Structures

STRUCTURAL MEMBRANES 2025

8-10 October 2025, Munich, Germany

PROGRAMME



XII International Conference on Textile Composites and Inflatable Structures

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**Munich, Germany
8– 10 October, 2025**

Greetings from the Structural Membranes 2025 Conference Chairpersons

We are delighted to welcome you to the 12th edition of the International Conference on Structural Membranes, held in Munich, Germany, from October 8–10, 2025.

This year's conference reflects the vibrant international community dedicated to membrane and lightweight structures, with contributions from researchers, engineers, and practitioners representing over 20 countries. The program features 60 presentations, including 6 plenary lectures and 8 organized sessions, showcasing the diversity and innovation within the field.

The topics covered span a wide spectrum of membrane and tensile structures, including design and analysis methods, material behaviour, formfinding techniques and construction technologies. Special emphasis is placed on sustainability, adaptive structures, and digitalization, as well as interdisciplinary approaches that bridge architecture, engineering, and computational design.

We extend our sincere gratitude to all authors for their valuable contributions, to the members of the Scientific Committee for their rigorous review and guidance, and to the session organizers whose efforts have shaped a rich and engaging technical program.

We hope that Structural Membranes 2025 will serve as a platform for fruitful discussions, new collaborations, and inspiration for future developments in the field. We also invite you to enjoy the cultural and architectural heritage of Munich during your stay.

We wish you a successful and enjoyable conference experience.



Ann-Kathrin Goldbach
Technische Universität
München, Germany
*Head of local organizing
team*



Carlos Lázaro
Universitat Politècnica de
València, Spain



Riccardo Rossi
CIMNE / Universitat
Politècnica de Catalunya,
Spain



Roland Wüchner
Technical University of
Munich, Germany

ACKNOWLEDGEMENTS

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Ann-Kathrin Goldbach
Technische Universität
München, Germany
Head of local organizing team



Carlos Lázaro
Universitat Politècnica de València,
Spain



Riccardo Rossi
CIMNE/Universitat Politècnica
de Catalunya, Spain



Roland Wüchner
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Germany

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Technische Universität München,
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CONFERENCE SECRETARIAT

[CIMNE CONGRESS BUREAU](#)

Campus Nord UPC
Building C1 - Office C4
Gran Capità, S/N 08034 Barcelona, Spain
Tel. +34 93 405 4696

Conference Secretariat & Invitation Letter: membranes@cimne.upc.edu

Payments & invoices: financialsupport@cimne.upc.edu



INVITED SPEAKERS



David Campbell

Geiger Associates, United States

Planning, Designing, Engineering, and Constructing a Long-Span Lightweight Tension Structure Project



Feike Reitsma

IASO, Spain

The new inflatable and retractable Bernabeu Stadium Roof



Françoise Fournier

Serge Ferrari Foundation, France

Sustainability and Tensile Architecture



Knut Göppert

SBP, Germany

Munich's Olympic roof - Ready for another 50 years



Ferdinand Ludwig

Technical University of Munich (TUM), Germany

Growing Architecture: Physics / Systems of Nature



Feike Reitsma

IASO, Spain

The new inflatable and retractable Bernabeu Stadium Roof

INVITED SESSIONS

IS001 Adaptive and Retractable Light-weight Membrane Structures

Organized by: C. Paech (*Schlaich bergermann partner – sbp se, Germany*)

IS002 Detailing - Case Studies - Installation Process

Organized by: J. Llorens (*School of Architecture - UPC, Spain*) and G. Filz (*Lightweight Structures Unit, Austria*)

IS003 ETFE-films and laminates

Organized by: K. Moritz (*IMS BAUHAUS Archineer Institutes e.V., Germany*) and L. Schiemann (*HS Munich, Germany*)

IS004 Fluid-Structure Interaction and Wind Engineering

Organized by: S. Warnakulasuriya (*Technical University of Munich, Germany*), R. Zorilla (*Universitat Politècnica de Catalunya, Spain*) and R. Wüchner (*Technical University of Munich, Germany*)

IS005 Green and low-carbon membrane buildings

Organized by: A. Goldbach (*TUM, Germany*), K. Sautter (*BPR Consult, Germany*) and V. Singer (*TUM, Germany*)

IS007 Parametric Design and Analysis Methods for Lightweight Structures

Organized by: A. Goldbach (*TUM, Germany*) and K. Hayashi (*Kyoto University, Japan*)

IS008 Performance of Tensioned Membrane Structures in Challenging or Extreme Conditions

Organized by: S. Krishnan (*University of Illinois at Urbana-Champaign, United States*)

IS009 End of Life, Circularity and Life Cycle Assessment of Structural Membranes

Organized by: M. Mollaert (*Vrije Universiteit Brussel, Architectural Eng, Belgium*), A. Zanelli (*Politecnico di Milano, TextilesHUB, Dept. ABC, Italy*) and C. Monticelli (*Politecnico di Milano, TextilesHUB, Dept. ABC, Italy*)



PRACTICAL INFORMATION

REGISTRATION

Registration will start on **Wednesday, October 8, 2025** from **8.00 onwards** at Matriculation Hall ([0501. EG.136 \(Immatrikulationshalle\)](#)) and continue on **Thursday** from **08:30** onwards.

To register, please present your **Registration Code** at the registration desk. You will then receive your **conference badge**.

Please remember to **wear your badge at all times** during the conference, as it is required for access to all sessions and events.

Secretariat Desk Timetable:

- **Wednesday, October 8:** 08:00 to 13:00 and 14:00 to 17:30
- **Thursday, October 9:** 08:30 to 13:00 and 14:00 to 16:00
- **Friday, October 10:** 09:00 to 13:00

WELCOME TO MUNICH!

Structural Membranes 2025 will take place in Munich, Germany on the premises of the TUM University. Munich is a city known for its blend of tradition, innovation and architectural ambition. As a center for engineering and design, it has long been associated with pioneering lightweight structures—including the Olympic Park roofs, which remain a reference in membrane architecture.

With its strong academic and cultural landscape, Munich offers an ideal setting for Structural Membranes 2025. We invite all participants to enjoy the city's cultural and scientific atmosphere.

CONFERENCE VENUE INFORMATION

The conference will be held at the [Technische Universität München](#), inside the main campus, in the main Building.

The main campus of the Technische Universität München is situated close to Munich central railway station and benefits from good public transport connections. It takes approximately **40 minutes by rail from the airport to the central station using the S1 or S8 line**.

The main campus is reachable by [public transportation](#) taking the **Subway U2 and U8 (Station Theresienstraße)**, the **Tram line 27 and 28 (Station Pinakotheken)** or the **Bus line 100**. You can check your trip [here](#).

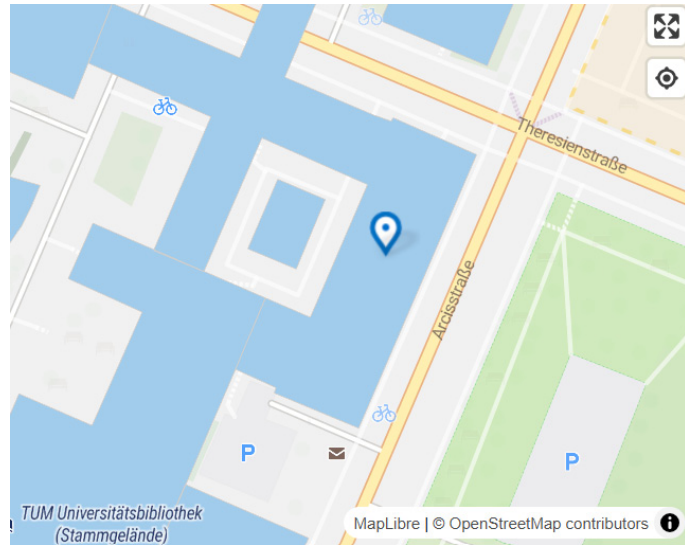
The Conference can be reached either directly from the Theresienstraße or by entering the TUM through the main entrance. The Main Entrance is located at Arcisstraße across from the Alte Pinakothek.

More specifically, the conference [registration desk and the breaks](#) will be located on ground level in the main building: Enter the TU Munich at the main entrance and go straight through the building until you reach the "Immatrikulationshalle".

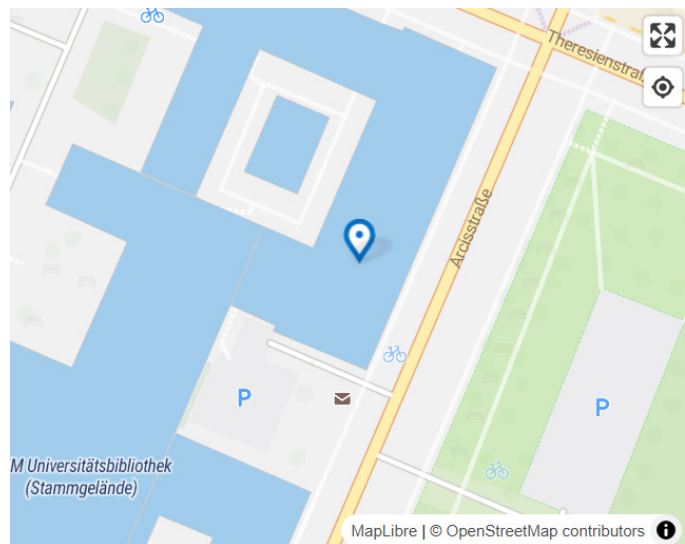


ROOMS LOCATION

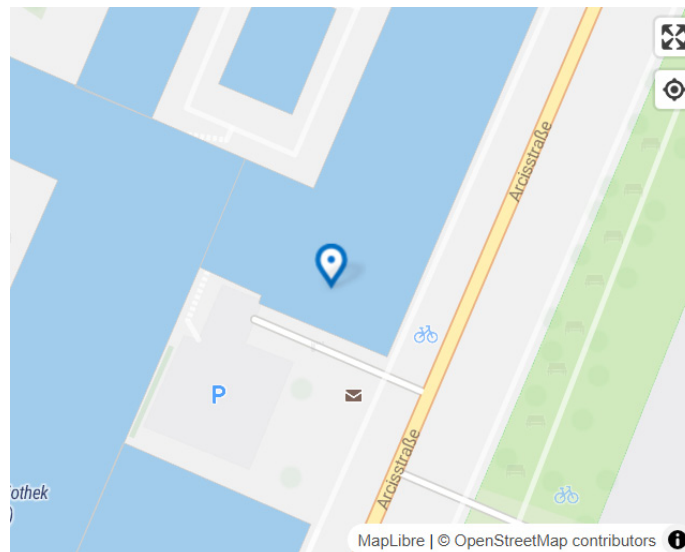
Room 1:
N° 2750 0507.03.750
(Karl Max von Bauernfeind
Hörsaal)



Room 2:
N° 2760 0507.02.760
(Hörsaal)



Room 3:
N° 2770 0507.02.770
(Hörsaal)



INTERNET ACCESS

Participants can either use **EDUROAM** or **BAYERNWLAN** (which is free and usable without registration).

PRESENTATIONS

The technical programme of **STRUCTURAL MEMBRANES 2025** includes 6 plenary lectures, 8 invited sessions, and 60 oral presentations.

Time

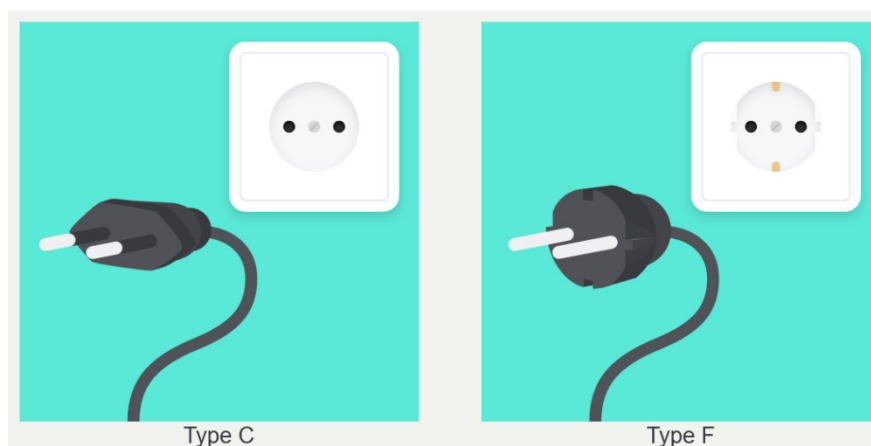
Each contributed talk will last 20 minutes, while plenary lectures will be 1 hour long. These durations include time for Q&A.

Equipment:

Each session room will be equipped with a PC, an LCD projector and an HDMI connection. Please make sure to bring your own adapter if needed. We strongly recommend bringing a backup copy of your presentation on a USB drive.

Power sockets and plug converters for electricity:

The power supply in Germany operates at 230V and 50Hz. The common electrical sockets are types C and F (see below). Plug type C has two round pins, while plug type F also has two round pins along with two grounding clips on the sides. You may need a power plug travel adapter to use your devices.



COFFEE & LUNCH BREAKS

Coffees and lunches will be served at the conference venue in the “Immatrikulationshalle”.

SOCIAL PROGRAMME

The Social Programme of Structural Membranes 2025 includes a Welcome Reception on the first conference day, at the conference venue and a Conference Dinner at the Café Reitschule.

- **Welcome Reception:** Wednesday, 8 October, TUM Immatrikulationshalle.
- **Conference Dinner:** Thursday, 9 October at Café Reitschule,

The Immatrikulationshalle (room 0501.EG.136) is located on the main campus (Stammgelände) of TUM, at **Arcisstraße 21**. It is just a short walk from the **INSIDE\OUT Research Pavilion**, which is also situated within the same campus.

During the welcome reception on Wednesday evening, we invite all participants to the exhibition of TUM selected students' Membrane Workshop projects in the matriculation hall. The Membrane Workshop is a joint teaching activity of the chairs of Structural Analysis and Structural Design, taught by Ann-Kathrin Goldbach and Lars Schiemann.



The Café Reitschule, is an historic venue with more than 100 years of tradition, located in the heart of Munich near the Englischer Garten.



The Restaurant:

Café Reitschule

Königinstraße 34, 80802 Munich

The dinner menu includes **vegan/vegetarian options** as well as a selection of **alcoholic** and **non-alcoholic drinks**.

Dinner Programme

- **6:00 PM** – Welcome drinks & snacks
- **7:00 PM** – Served menu / Opening of the buffet
- **11:00 PM** – End of the event

We look forward to sharing these moments with you!

Emergency Numbers in Germany (Free of Charge)

- **Fire Brigade & Medical Emergency Services: 112**
- **Police: 110**
- **Non-Emergency Medical Assistance (On-Call Doctor Service): 116 117**

Taxi Services in Germany

In Germany, taxis can be ordered by phone, app, or found at taxi stands in cities and near train stations. Here are some nationwide and city-specific options:

- **Nationwide Taxi Hotline: 22456** (from mobile phones only)
(Connects you to a local taxi service via **Taxi Deutschland**)
- **Taxi Deutschland App**
Available across Germany in most cities
www.taxi-deutschland.net

TECHNICAL PROGRAMME OVERVIEW

	Wednesday 08/10/2025	Thursday 09/10/2025	Friday 10/10/2025
8:00	Registration ⌚ 08:00 - 09:00		
9:00	Opening Ceremony and Plenary Lecture I ⌚ 09:00 - 10:30 📍 Room 1	Plenary Lecture III and IV - TUM spotlights ⌚ 09:00 - 11:00 📍 Room 1	Plenary Lecture VI ⌚ 09:00 - 10:00 📍 Room 1
10:00	Coffee Break		Coffee Break
11:00	Technical Sessions ⌚ 11:00 - 13:00	Coffee Break	Technical Sessions ⌚ 10:30 - 13:15
12:00		Technical Sessions ⌚ 11:30 - 13:00	
13:00	Lunch Break ⌚ 13:00 - 14:00	Lunch Break ⌚ 13:00 - 14:00	Farewell Lunch ⌚ 13:15 - 14:00
14:00	Plenary Lecture II ⌚ 14:00 - 15:00 📍 Room 1	Plenary Lecture V ⌚ 14:00 - 15:00 📍 Room 1	
15:00	Coffee Break	Coffee Break	
16:00	Technical Sessions ⌚ 15:30 - 17:30	Technical Sessions ⌚ 15:30 - 17:30	
17:00			
18:00	Welcome Reception ⌚ 18:00 - 19:30		
19:00			
20:00		Conference Dinner ⌚ 20:00 - 22:30	
21:00			
22:00			



STRUCTURAL MEMBRANES 2025

Technical Programme

Last updated: 2025-10-07 08:57

Wednesday, 08/10/2025

Wed, 08/10/2025 08:00 - 09:00

Registration

Wed, 08/10/2025 09:00 - 10:30

Room 1

Opening Ceremony and Plenary Lecture I

Chaired by: Dr. Ann-Kathrin Goldbach (Technical University Munich)

Munich's Olympic roof - Ready for another 50 years

***K. Göppert**

Wed, 08/10/2025 10:30 - 11:00

Coffee Break

Wed, 08/10/2025 11:00 - 13:00

Room 1

IS001A - Adaptive and Retractable Light-weight Membrane Structures I

Main Organizer: Mr. Christoph Paech (schlaich bergermann partner - sbp)

Chaired by: Mr. Christoph Paech (schlaich bergermann partner - sbp)

Mobile roof of Suzanne Lenglen court at Roland-Garros : Membrane roof construction & feedback

***S. Aubry**, C. Lefeu, B. Vaudeville

Learning by experience – Al Wakrah membrane becomes Al Janoub membrane

***M. Jenni**

The Avicii Arena retractable ceiling - Innovative design and installation

***T. Perez dos Santos**, A. Cernysevas

The innovative details for a retractable roof over the historic natural theater in Bad Elster and how they proved themselves in practice

***A. Hub**, A. Rein

Development of a pneumatic actuator based on bio-PU coated fabrics for architectural applications

R. Aditra, S. Mora Hidalgo, A. Comitti, ***P. Beccarelli**, D. Misseroni, F. Bosi

Wed, 08/10/2025 11:00 - 13:00

Room 2

IS006A - Numerical Methods and Modeling for Lightweight Structures I

Main Organizer: Dr. Ann-Kathrin Goldbach (Technical University Munich)

Chaired by: Dr. Ann-Kathrin Goldbach (Technical University Munich), Dr. Veronika Singer (Technical University Munich)

Analysis of lightweight structures with large rotations using the dynamic relaxation method.

***M. Sartorelli Venancio de Souza**, R. de Oliveira Pauletti

Determining safe perimeters to design prestressed tensile structures for securing shelters against dronesción

***R. Lohner**, F. Mut, J. Baum

The Effect of Slits and Notches in Fabric Specimens under Biaxial Tension

***M. Boljen**, F. Kölbl, W. Harwick, R. Taylor

A Wrinkling Model Based on the Spectral Decomposition of the Stress Tensor and the Mixed Wrinkling Criterion

***J. Kiendl**, D. Zhang

An Optimization-based Approach to Shell Morphing

***L. Mariani**, V. Varano, S. Gabriele, L. Greco, M. Cuomo

Exclusion of Artificial Shear Stiffness: 3D Membrane Dynamics with 3D Beam Dynamics (Abstract)

***C. Corte**

Wed, 08/10/2025 11:00 - 13:00

Room3

IS008A - Performance of Tensioned Membrane Structures in Challenging or Extreme Conditions I

Main Organizer: Dr. Sudarshan Krishnan (University of Illinois at Urbana-Champaign)

Chaired by: Dr. Sudarshan Krishnan (University of Illinois at Urbana-Champaign)

Failures of Tension Membrane Fabric Structures and Design to Mitigate Extent of Damage

***D. Campbell**

Arenas&Asociados Tensile Structures Behaviour under Harsh Climate Events

***S. Guerra**, G. Capellán, J. González

Wed, 08/10/2025 13:00 - 14:00

Lunch Break

Wed, 08/10/2025 14:00 - 15:00

Room 1

Plenary Lecture II

Chaired by: Dr. Carlos Lázaro (Universitat Politècnica de València, Spain)

The new inflatable and retractable Bernabeu Stadium Roof

***F. Reitsma**

Wed, 08/10/2025 15:00 - 15:30

Coffee Break

Wed, 08/10/2025 15:30 - 17:30

Room 1

IS002A - Detailing - Case Studies - Installation Process I

Co-Organized by G. Filz (Lightweight Structures Unit, Austria)

Main Organizer: Prof. Josep Ignasi de LLORENS DURAN (UPC, School of Architecture, Barcelona, Spain)

Chaired by: Prof. Josep Ignasi de LLORENS DURAN (UPC, School of Architecture, Barcelona, Spain)

Integrated Detailing and Thermal Optimization in a Tent-Based Textile Structure

***T. Thommen**

Assembly influences on the long-term load-bearing capacity of glass/PTFE fabrics

***J. Uhlemann**, N. Stranghöner

Fundamental Design Principles for Tensile Membrane Structures: A Call for Structural Awareness in Architectural Practice

***C. Angulo Pérez**

Temporary membrane cover of the glass roof of the Grand Palais, Paris

***S. Aubry**, C. Lefeue, B. Deroisy, M. King

Wed, 08/10/2025 15:30 - 17:30

Room 2

IS006B - Numerical Methods and Modeling for Lightweight Structures II

Main Organizer: Dr. Ann-Kathrin Goldbach (Technical University Munich)

Chaired by: Mr. Klaus Sautter (Chair of Structural Analysis), Dr. Ann-Kathrin Goldbach (Technical University Munich)

Evaluation of Equivalent Membrane Stiffnesses of Single-Set Rope Meshes

***D. Drayer**

Light weight portable tensairity bridge. The solution for fast bridging operations

C. Struch, ***J. Marcipar**, E. Oñate

Coupled Multiphysics Simulation of Flexible Membrane Structures Under Extreme Load Conditions

***V. Singer**, A. Goldbach, A. Larese, R. Wüchner

Development of a new ring model for flexible protection networks

***J. Sigenege**, V. Singer, R. Wüchner

Comparison of Two Partitioned Fluid-Structure Interaction Simulation Methods for a Membrane Loaded by Ponding Water and Wind

N. Narayanan, R. Wüchner, ***J. Degroote**

Singularity Refraction in Thin Parabolic Elastic Shells with a Rigid Fold

***P. KARAMIAN - SURVILLE**

Wed, 08/10/2025 18:00 - 19:30

Welcome Reception

Thursday, 09/10/2025

Thu, 09/10/2025 09:00 - 11:00

Room 1

Plenary Lecture III and IV - TUM spotlights

Chaired by: Prof. Kai-Uwe Bletzinger (Technical University of Munich, Germany)

Material, Data, and Energy in Architectural Additive Manufacturing

***K. Dörfler**

Growing Architecture: Physics / Systems of Nature

***F. Ludwig**

Thu, 09/10/2025 11:00 - 11:30

Coffee Break

Thu, 09/10/2025 11:30 - 13:00

Room 1

IS002B - Detailing - Case Studies - Installation Process II

Co-Organized by G. Filz (Lightweight Structures Unit, Austria)

Main Organizer: Prof. Josep Ignasi de LLORENS DURAN (UPC, School of Architecture, Barcelona, Spain)

Chaired by: Prof. Josep Ignasi de LLORENS DURAN (UPC, School of Architecture, Barcelona, Spain)

Stabilizing cable domes

***J. LLORENS**

From Unique Concepts to Systematic Execution - Detailing and Installation in Membrane Architecture under sustainable aspects

***D. Emmer, P. Herbert**

Connection Detailing and Erection of Prestressed Stayed Masts: Structural Integration and Construction Methodology

***S. Krishnan**

Renovation of Dresden Central Station membrane roof

***T. Hermeking**

Thu, 09/10/2025 11:30 - 12:10

Room 2

IS004A - Fluid-Structure Interaction and Wind Engineering I

Main Organizer: Dr. Suneth Warnakulasuriya (Chair of Structural Analysis)

Chaired by: Dr. Suneth Warnakulasuriya (Chair of Structural Analysis)

Adjoint-based Stress Identification via Material Tensor Reconstruction in Membrane Structures using Displacement or Strain Measurements

***T. Ansari, S. Warnakulasuriya, I. Antonau, A. Goldbach, R. Löhner, H. Antil, F. Airaud, R. Wuechner**

Dynamic response of hyperbolic paraboloid membrane structures under wind loading

***R. Castedo-Hernandez, A. Kodakkal, A. Goldbach, R. Wüchner**

Thu, 09/10/2025 12:20 - 13:00

Room 2

IS006C - Numerical Methods and Modeling for Lightweight Structures III

Main Organizer: Dr. Ann-Kathrin Goldbach (Technical University Munich)

Chaired by: Dr. Ann-Kathrin Goldbach (Technical University Munich)

A Generalized Wrinkling Model for Hyperelastic Membranes Using Spectral Decomposition of the Stress Tensor

***D. ZHANG**

CO2 Calculator for Tensioned Membrane Structures: Enhancing Industry Commitment to Carbon Reduction

***R. Roithmayr, B. Ferreyra**

Thu, 09/10/2025 13:00 - 14:00

Lunch Break

Thu, 09/10/2025 14:00 - 15:00

Room 1

Plenary Lecture V

Chaired by: Prof. Roland Wüchner (Technical University of Munich (TUM))

Planning, Designing, Engineering, and Constructing a Long-Span Lightweight Tension Structure Project

***D. Campbell**

Thu, 09/10/2025 15:00 - 15:30

Coffee Break

Thu, 09/10/2025 15:30 - 17:30

Room 1

IS002C - Detailing - Case Studies - Installation Process III

Co-Organized by G. Filz (Lightweight Structures Unit, Austria)

Main Organizer: Prof. Josep Ignasi de LLORENS DURAN (UPC, School of Architecture, Barcelona, Spain)

Chaired by: Prof. Josep Ignasi de LLORENS DURAN (UPC, School of Architecture, Barcelona, Spain)

Cable and Cable-Net Reinforced Membranes

J. Holl, D. Stroebe

Too much tension? Textile Structures in tense environments

***K. Bernert**

Single Layer Membrane Solution for External Roofs in a Historical Building

***C. Armendariz**

Multi Purpose Membrane Structure in Abano Terme

***B. Stimpfle**

A Second Life for PVC/PES Membrane Material: Re-Use-Membrane Roof for a Modular Timber Structure Pavillon

***J. Cremers**, Y. Zelenka, S. Baier

Integrating Client Vision and Execution Details through Strategyfinder: A Case Study on Architectural Collaboration

***A. Reinbacher**, R. Roithmayr

Thu, 09/10/2025 15:30 - 17:30

Room 2

IS007A - Parametric Design and Analysis Methods for Lightweight Structures I

Main Organizer: Dr. Ann-Kathrin Goldbach (Technical University Munich)

Chaired by: Dr. Ann-Kathrin Goldbach (Technical University Munich)

Fabrication-Aware Computational Form-Finding Approach for CNC-Knitted Membranes

***A. Kariouh**, V. Lorenzen da Silva, M. Popescu, P. D'Acunto

Adaptive Parametric Modelling via Grasshopper for Simulation of the Erection Sequence in Large-Span Cable Roofs: Correlation with Data Recorded during Construction

***A. Borjabaz**, I. Hernández, J. Larena

Integration of parametric design and analysis tools

***P. Kast**

A Graph-Based Deep Q-Learning Framework for Grammar-Guided Structural Form-Finding of Lightweight Structures

***B. Kumaravel**, L. Bleker, K. Tam, P. D'Acunto

Parametric Technological Modeling Tools and Techniques for Public Spaces: Designing a New Tensile Roof in Milan

***S. Viscuso**, G. Piantato, A. Zanelli

Graph-based Inverse Structural Form-Finding of Discrete Surface Structures

***L. Bleker**, K. Tam, P. D'Acunto

Thu, 09/10/2025 18:00 - 22:30

Conference Dinner

Friday, 10/10/2025

Fri, 10/10/2025 09:00 - 10:00

Room 1

Plenary Lecture VI

Chaired by: Mr. Riccardo Rossi (CIMNE-UPC)

Sustainability and Tensile Architecture

***F. Fournier**

Fri, 10/10/2025 10:00 - 10:30

Coffee Break

Fri, 10/10/2025 10:30 - 13:15

Room 1

IS003A - ETFE-films and laminates I

Main Organizer: Prof. Karsten Moritz (IMS BAUHAUS Archineer Institutes e.V.)

Chaired by: Prof. Karsten Moritz (IMS BAUHAUS Archineer Institutes e.V.)

Testing of welded ETFE-foils for quality assurance

***D. Runge**, J. Uhlemann, N. Stranghöner

Application of nonlinear constitutive and yield models in the design of ETFE cladding elements

A. Comitti, ***L. Seixas**, A. Cabello, A. Bown, C. Paech, F. Bosi

Failure Process of ETFE Foil

***D. Karádi**, D. Hegyi

Long-term behaviour of ETFE films - Evaluation of monoaxial creep and relaxation tests after 100,000 hours of loading

G. Mueller, ***K. Moritz**, F. Goecke

Fri, 10/10/2025 10:30 - 13:15

Room 2

IS007B - Parametric Design and Analysis Methods for Lightweight Structures II

Main Organizer: Dr. Ann-Kathrin Goldbach (Technical University Munich)

Chaired by: Dr. Ann-Kathrin Goldbach (Technical University Munich)

Numerical Calculation Methods in Membrane Engineering

***R. Lang**, A. Niemeier

Structure and Material Informed Patching of CNC-Knitted Membranes

***V. Lorenzen da Silva**, A. Kariouh, P. D'Acunto, M. Popescu

A Hierarchical Form-finding Workflow in the Conceptual Design Phase

***F. He**, H. Asadi, P. D'Acunto

Timber Gridshells built from Asymptotic and Geodesic Lamellas: Holistic Design towards Industrial Production.

***S. Hoyer**, P. D'Acunto, E. Schling

Design and Optimisation of Quad-Net Topologies via Airy Stress Functions

***M. Konstantatou**, A. McRobie, R. Oval

Parametric Study of the Mechanical Behaviour of Membrane Tensegrity

L. Ferragu, ***J. Rebeck**, R. Oval

Fri, 10/10/2025 10:30 - 13:15

Room3

IS09A - End of Life, Circularity and Life Cycle Assessment of Structural Membranes I

Main Organizer: Prof. Carol Monticelli (Politecnico di Milano)

Chaired by: Prof. Carol Monticelli (Politecnico di Milano)

Picture This: A New Perspective on Tensile Membrane Degradation

***P. Romain**, R. Ball

The impact of textile shading systems in façade retrofitting: evaluating the operational phase in the LCA

***G. Procaccini**, C. Monticelli, A. Angelotti

Monitoring of Structural Membranes through a novel integrally manufactured Strain Sensor Network

***K. Kopelmann**, F. Schmidt, A. Happel, T. Lang, H. Le Xuan, C. Cherif

Post-Consumer Recycled (PCR) ETFE Foil: Recycling of the Chelsea and Westminster Hospital ETFE Roof

***K. Solanki**, C. Monticelli, M. Padilla Marcos

Fri, 10/10/2025 13:15 - 14:00

Farewell Lunch



IACM

CIMNE^R