



# 8<sup>th</sup> TensiNet Symposium 2026 & 7<sup>th</sup> Essener Membranbau Symposium 2026 at University of Duisburg Essen

## Shaping the pathway to future tensioned membrane design

The symposium will be held at the University of Duisburg Essen, Campus Essen (Germany) from Wednesday 30th September 2026 till Friday 2nd October 2026. The three main topics are:

### Design, Modelling and Simulation of Structural Membranes

Structural membranes are lightweight and efficient solutions for architectural applications in roof or façade structures. Their complex load-bearing material behaviour requires advanced design approaches, computational modelling, and simulation techniques to optimise performance and durability. Innovative solutions have to be developed integrating different materials, structural analysis, and digital tools to push the boundaries of contemporary membrane structures.

- Administrative Regulations in Europe
- Material Modelling and Testing Procedures
- Numerical Methods and Formfinding

### Keynote speakers

Several keynote speakers expressed interest in sharing their recent projects, research outcomes-outputs, reflections, contributions to a circular economy and sustainability on the three main topics.

- Bernd Stimpfle (form TL) will give a presentation on the preservation of membrane structures through modernisation.
- Christoph Paech (sbp) thematises the durability assessment and enhancement of membrane structures.
- Professor Alessandra Zanelli (Politecnico Milano) and Marc Gabriel (Werner Sobek AG) will contribute to the topic of climate resilient design of membrane structures as shading systems of public places and sunlight controllers.
- Dr. Carl Maywald (Vector Foiltec) and Fahrid Sahnoune (Serge Ferrari) will present membrane materials and their behaviour under extreme conditions such as fire and their fire-safety.
- Dr. Jörg Uhlemann (IML/UDE) and Professor Natalie Stranghöner (IML/UDE) are concerned with the modelling of membrane structures in general and the impacts of assembly on the long-term behaviour of glass-PTFE fabrics in particular.

### Materials and Execution

The selection of materials and type of execution are crucial for ensuring the performance, durability, and efficiency of structural systems. Advances in material science, fabrication techniques, and construction processes play a key role in optimising the structural behaviour and sustainability. Innovative materials and manufacturing technologies as well as best practices in execution are needed to enhance the quality and reliability of membrane projects.

- Construction Methods
- New Materials
- Execution Procedures

### Sustainability and Building Physics

Sustainable building design integrates energy efficiency, material recycling, and environmental impact reduction to create resilient and responsible structures. Building physics plays a key role in optimizing thermal performance and comfort while ensuring energy efficiency. The use of recyclable materials reduces waste and promotes circular construction practices, while fire safety considerations ensure compliance with regulations and enhance occupant protection. The balance between sustainability, safety, and performance has to be enhanced to advance the future of eco-friendly and resilient buildings.

- Climate Impact / Shading of Places
- Life-Cycle Assessment / Recycled Materials
- Fire safety



Figure 1. Renovation of the Volkspark Stadion, Hamburg © schlaich bergemann partner

**CALL FOR ABSTRACTS** Interested to participate? Choose one of the three main topics and upload your abstract! For more information see: <https://www.uni-due.de/iml/tensinet-ems2026.php#>  
**Abstract submission 31.08.2025** | Abstract acceptance 31.10.2025 | Paper submission 15.02.2026  
| Paper acceptance or feedback 31.03.2026 | Revised paper submission 30.04.2026

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website: [www.uni-due.de/iml/tensinet-ems2026.php](http://www.uni-due.de/iml/tensinet-ems2026.php)

### Organising Committee

Institute for Metal and Lightweight Structures at the University of Duisburg-Essen: Prof. Dr. Natalie Stranghöner, Dr. Jörg Uhlemann, Dominik Runge, Stefanie Schülpen, Felix Surholt, André Westerhoff / TensiNet Association: Evi Corne, Prof. Dr. Marijke Mollaert, Bernd Stimpfle

### Sponsoring

There is the opportunity to sponsor the TensiNet-EMS 2026 symposium. There are 4 categories with corresponding benefits: Platinum sponsorship for 4000€; Gold for 3000€; Silver for 2000€ and Copper for 1000€. For more information see [www.uni-due.de/iml/te26-id10.php](http://www.uni-due.de/iml/te26-id10.php).