

ADVANCED METHODS FOR THE ANALYSIS AND DESIGN OF TENSILE STRUCTURES

FALKO DIERINGER^{*}, ROLAND WÜCHNER^{*} AND KAI-UWE BLETZINGER^{*}

^{*} Chair of Structural Analysis, TU Munich
Arcisstr. 21, 80333 Munich, Germany
{falko.dieringer, wuechner, kub}@tum.de

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ABSTRACT

The objective of this Minisymposium is to bring together international experts in state-of-the-art research and technology for design, analysis, construction and maintenance of tensile structures.

Hence, contributions to this Minisymposium should deal with the presentation of the challenging tasks in the individual design steps of a tensile structure. In this Minisymposium the topics vary from geometrical modelling in the design process, construction of membrane structures, advanced simulation technologies for structural analysis of lightweight structures under various load conditions, the description and validation of suitable material laws, methodologies for form finding and patterning, simulation and validation of inflatable structures, adaptive membrane structures, energetic aspects, testing procedures, maintenance techniques up to manufacturing.

Exemplary, but not exclusive list of applications in this Minisymposium could be:

- membrane roofs and covers
- inflatable pavilions and buildings
- airships
- airspace structures
- inflatable antennas
- high altitude platforms
- furniture
- bio-membranes
- textiles for clothes, etc.

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