

TensiNewsflash

SUMMER 2023

Dear TensiNet member,

Please find the latest TensiNewsflash.

Our TensiNet Symposium TENSINANTES2023 "Membrane architecture: the seventh established building material. Designing reliable and sustainable structures for the urban environment", which took place at Nantes Université, has been a successful edition with inspiring lectures and with lots of opportunities to have interesting discussions with colleagues and friends.

Enjoy your reading as well as the summer season!



Cocktail drink with in the background the prototype of the bouncing bridge (see article in TN43); Jean-Christoph Thomas and Bernd Stimpfle at Les Machines de l'île where the conference dinner took place © Evi Corne

TENSINEWS

Call for contribution TensiNews 45 – deadline Wednesday 26th July

We invite our members to submit for the next TensiNews issue 45 an article, project description, upcoming event, new development, research report or book review*. Send your contribution to evi.corne@vub.be.

Please follow these simple rules:

- The text should be written in English, submitted in Word-format
- Images are to be sent separately, with a resolution of 300dpi in .jpg-format (For easy reference during the layout process, it can be useful to include a copy of the pictures in the text file as well).
- For research articles the maximum word amount is set to 5000 words (equivalent of four pages in TensiNews layout).
- Project descriptions need to be accompanied by full contact details of the author, and other information such as architect, contractor, approx. span, height, membrane material, etc. This facilitates the inclusion of the project in the online database. (See below)

Name of the project: Location address: Client (investor):

Function of building:
 Type of application of the membrane:
 Year of construction:
 Architects:
 Multi-disciplinary engineering:
 Structural engineers:
 Consulting engineer for the membrane:
 Engineering of the controlling mechanism:
 Main contractor:
 Contractor for the membrane (Tensile membrane contractor):
 Supplier of the membrane material:
 Manufacture and installation:
 Material:
 Covered surface (roofed area):

* TensiNet and TensiNews provide to partners and members a platform to present projects, new developments and scientific results. The articles within TensiNews should have a scientific, technical or journalistic value, i.e. it should be informative, and not mainly marketing information.

TensiNews 1 to 44 Notice that [recent TensiNews issues](#) (login) as well as [older TensiNews issues](#) (without login) are always available online!

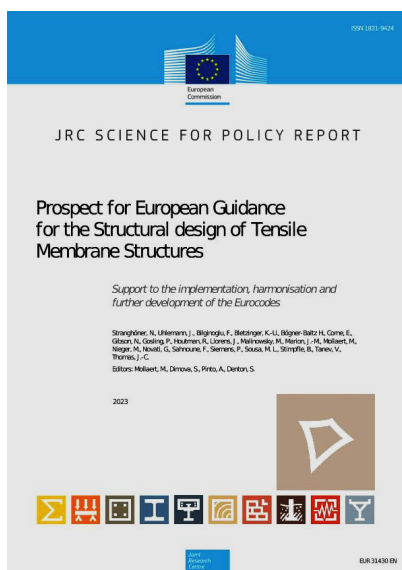
WORKING GROUP EUROCODE



WG leader: Marijke Mollaert

CEN/TC 250 unanimously approved proceeding to Formal Vote for the TS 19102 Design of tensioned membrane structures (CEN/TC 250 N 3269). The CEN Formal Vote ends 22/06/2023.

A voting on execution provisions for tensioned membrane structures was launched and closed 27 March 2023. The result was positive: WG 5 will start preparing a working document on assumptions relating to execution matters upon which the design provisions of tensioned membrane structures rely (based on content in prCEN/TS 19102, without prejudice as to where the content will finally be published).



Perhaps you took already the opportunity to read this republished JRC science for policy report: [Link](#)

The final aim is to develop a Eurocode for the Structural Design of Tensile Membrane Structures, which will help to design and implement these lightweight structures. The report consists of three major parts: 1) general explanations giving scientific and technical background for the design of membrane structures, 2) state-of-the-art overview on existing national and European rules and recommendations on the design of membrane structures, and 3) proposals for European harmonized design rules, which could be part of the future Eurocode for Tensile Membrane Structures.

WORKING GROUP SUSTAINABILITY & COMFORT



WG leader: Carol Monticelli

During TENSINANTES2023 one of the main topics was dedicated to **STRUCTURAL MEMBRANE: an answer to issues of the 21st century** with a focus on lightweight design, well-being, environmental impact, energy and acoustic performance, life cycle of materials and structures, end of life of membrane structures. The keynote lecture “**The Pathways to Zero Carbon for Tensioned Membrane Architecture: ongoing actions and next steps**” by Bruce Danziger and Carol Monticelli has been further discussed in the **WG sustainability & comfort meeting**.



Bruce Danziger and Carol Monticelli presenting their keynote lecture © Evi Corne

The WG meeting focused on the consultation on Product Category Rule of Structural membranes (coated technical textiles, technical textiles and foils) under development and on the PFAS restrictions for Fluoropolymers materials: in both cases, the opinions of participants and the good and productive discussion demonstrated that now is the time to shift to new approaches based on lifecycle thinking and environmental impacts.

Not yet active in this WG and interested to join? Send an email to info@tensinet.com

NEW WORKING GROUP DIGITAL

The idea of this new working group was launched during the General Assembly. The aim is to give TensiNet a higher visibility on digital platforms. The leader of this WG is Maxime Durka. At LinkedIn we have today more than 1800 followers!

ACTIVITIES AND NETWORKING

SYMPOSIUM TENSINANTES 2023 – Nantes Université, France

The logo for TENSINANTES 2023, featuring the text 'TENSINANTES 2023' in a stylized font with a starburst effect.

TENSINANTES2023 : TensiNet Symposium 2023 at Nantes Université
Membrane architecture: the seventh established building material. Designing reliable and sustainable structures for the urban environment.

Logos for TensiNet, Nantes Université, and Gem (Groupe de Recherche en Membranes).

TENSINANTES 2023 focused on the significance and potential of fabrics and foils as established building materials and promoted the use of tensile structures in a world of constant change and adaptation. The optimal use of materials, the realisation of a Eurocode, sustainability and reuse are some of the topics that were covered, ranging from research over practical experiences to realisations.

PROCEEDINGS OF TENSINANTES2023 All papers were collected and an e-book was compiled. It is consultable on the [TensiNet](#) website or the [TENSINANTES2023](#) website. Please disseminate within your colleagues and friends.

SYMPOSIUM 2026?! – call to organise the next TensiNet symposium

Every 3 years TensiNet organises together with a university member its TensiNet symposium. Interested in this adventure? Send an email to info@tensinet.com and add some basic information on the university, the organising team, the city and proposed topics.

UPCOMING SYMPOSIA Do not miss 2 other interesting events:

- **IASS 2023** (10-14.07.2023) in Melbourne, Australia: The theme of the IASS 2023 symposium is **Integration of Design and Fabrication**, which is becoming increasingly important with the developments of digital technologies in both design and manufacturing. The symposium covers all aspects related to material, design, computation, construction, maintenance, history, environmental impact and sustainability of shell and spatial structures in all fields of application. <https://www.iass2023.org.au/>
- **STRUCTURAL MEMBRANES 2023** (2-4.10.2023) in Valencia, Spain: The objectives of Structural Membranes 2023 are to collect and disseminate state-of-the-art research and technology for design, analysis, construction and maintenance of textile and inflatable structures. The conference will address both the theoretical bases for structural analysis and the numerical algorithms necessary for efficient and robust computer implementation. A significant part of the conference will be devoted to discuss advances in new textile composites for applications in membrane and inflatable structures in the building and construction sectors, as well as in innovative design, construction and maintenance procedures. <https://structuralmembranes2023.cimne.com/>

MISC -----

INVOICES 2023 It seems that some of the invoices 2023 weren't paid before the indicated deadline. To facilitate our work please do not wait with your payment. Thank you in advance for your understanding.

Kind regards,

Evi Corne & Marijke Mollaert