

Press

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Techtextil
Leading International Trade Fair for Technical Textiles and Nonwovens
Frankfurt am Main, 9 to 12 May 2017

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Inspiring architecture: eight international projects to receive awards in the 'Textile Structures for New Building' competition

Techtextil competition for students honours air-inflated halls, tents for refugees, concrete textile and smart façade elements

Whether textile reinforced concrete, fabric for lightweight structures or functional textiles: Techtextil (09 to 12 May 2017), the leading international trade fair for technical textiles and non-wovens, introduces architects, building owners, construction engineers and planners to a wide range of fibre-based materials for the 'Buildtech' sector.

In line with this, the winners of the 'Textile Structures for New Building' competition have been chosen. An international jury of renowned civil engineers and architects gave eight awards in various categories. With this competition for students, Techtextil honours the ideas of students and young professionals on building with textiles and textile-reinforced materials.

"The award-winning projects were selected by the jury for their inspiration and new architectural perspectives. The spectrum ranges from visually appealing air-inflated halls and improved tent dwellings for refugee camps, via flexible, lightweight exterior shells and textile interior-furnishing systems, to smart façade elements and woven structures made of concrete", explains Michael Jänecke, Brand Manager Technical Textiles and Textile Processing at Messe Frankfurt. "The projects illustrate the variety of applications for textile structures in architecture and building."

The jury gave three awards in the micro-architecture category, two in the material innovation category and one in the composites and hybrid structures category. Together with the TensiNet association, Messe Frankfurt will present the awards at the special student competition area (Hall 4.1, stand H41) during Techtextil at 16.00 hrs on 9 May.

With the support of the international TensiNet association, Techtextil honours students and young professionals from the fields of architecture, civil engineering and product design with the award. The technical /

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scientific supervisor is Prof Werner Sobek, Director of the Institute for Lightweight Structures and Conceptual Design (ILEK) of the University of Stuttgart.

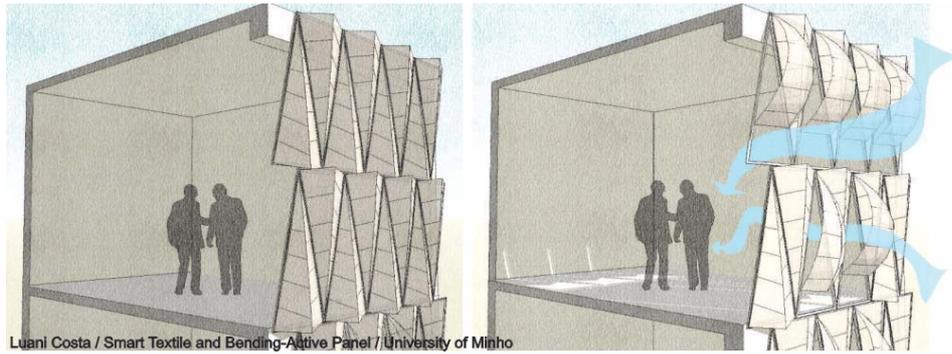
The award-winning projects are:

First prize in the **macro-architecture** category goes to Katrin Fleischer of the Technical University of Munich for her '**Deployable Roof**', a mobile canopy consisting of a folding support grid in the form of a barrel vault and an integrated membrane covering held under tension by bending-active slats. **Second prize** goes to Margarita Fernández Colombás, Miguel Ángel Maure Blesa, Raquel Ocón Ruiz and Hugo Cifre of the European University of Madrid for their '**Espacio de la Nube**'. The project is based on pneumatic-tent technology, which is familiar from covered tennis courts. The jury was impressed by the complexity of the project on the aesthetic, structural and spatial planes. **Third prize** in this category goes for Ahmad Nouraldeen of the Anhalt University of Applied Sciences for his design of a **tent dwelling for refugee camps**. In terms of form and function, the tent is reminiscent of the wigwams of American Indians. However, it also integrates renewable energies and improved the quality of life of the inhabitants through the inclusion of thermal insulation and ventilation.



First prize macro-architecture: 'Deployable Roof' / Katrin Fleischer, Technical University of Munich

First prize in **micro-architecture** category goes to Luani Costa of the University of Minho in Portugal for a **smart façade element**. The adaptive system consists of triangular membrane elements that the user can open or close individually or all together in response to the conditions prevailing, i.e., wind, rain or sunshine. **Second prize** goes to Julia Mayer of the Technical University of Vienna for '**Tryplo**', a reinterpretation of a modular system using textile components. The modular components are based on the tetrahedron and can be combined to make three-dimensional structures. In addition to applications as toys, the system is also suitable for use in furniture or textile structures.



Luani Costa / Smart Textile and Bending-Active Panel / University of Minho

First prize micro-architecture: smart façade element / Luani Costa, University of Minho (Portugal)

In the **material innovation** category, **first prize** goes to Natascha Unger and Idalene Rapp of the Berlin-Weissensee Academy of Arts for their **‘Stone Web’**. The project illustrates one of the most important aspects of lightweight design and is a pioneering contribution to the use of fibre-based structures in the world of building. **Second prize** goes to Malu Lücking, Rebecca Schedler and Jack Randol (also from the Berlin-Weissensee Academy of Arts) for **‘Shifting Stone’**, a prefabricated basalt tissue system that can be integrated into a façade. The ‘Shifting Stone’ entry visualises and employs the fascinating relationship between a fibre from one of the hardest stones and the transformation into a flexible, self-active system.



First prize material innovation: ‘Stone Web’ / Natascha Unger, Idalene Rapp, Berlin-Weissensee Academy of Arts

In the **composites and hybrid structures** category, Anne-Kathrin Kühner took first place with her idea for a **concrete textile**. To make the concrete textile, a textile tube is filled with high-performance concrete.



First place composites and hybrid structures: concrete textile / Anne-Kathrin Kühner

The resulting filament is flexible and can be shaped immediately after the tube has been filled with concrete to create woven, knitted or knotted textiles.

The awarded projects will be on show throughout the fair in a special exhibition.

Note for the editor:

Pictures are available for download here: <http://m-es.se/Wt8g>

Background information on Messe Frankfurt

Messe Frankfurt is the world's largest trade fair, congress and event organiser with its own exhibition grounds. With some 2,400 employees at 30 locations, the company generates annual sales of over €640 million. Thanks to its far-reaching ties with the relevant sectors and to its international sales network, the Group looks after the business interests of its customers effectively. A comprehensive range of services – both onsite and online – ensures that customers worldwide enjoy consistently high quality and flexibility when planning, organising and running their events. The wide range of services includes renting exhibition grounds, trade fair construction and marketing, personnel and food services.

With its headquarters in Frankfurt am Main, the company is owned by the City of Frankfurt (60 percent) and the State of Hesse (40 percent).

For more information, please visit our website at: www.messefrankfurt.com